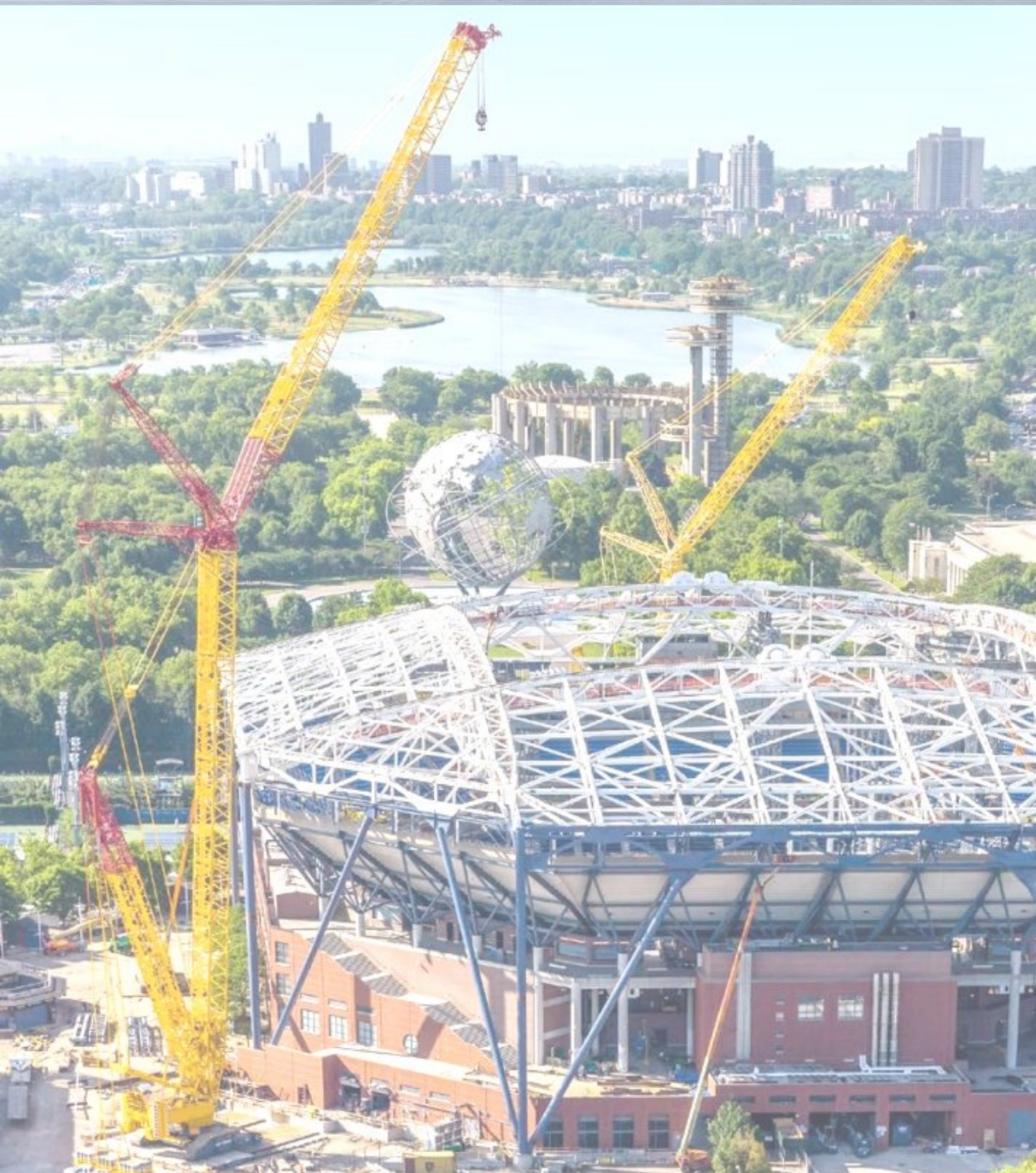
COMPANY PROFILE

HANCHANG HEAVY EQUIPMENT

Rental of Heavy Duty Cranes



HANCHANG

CONTENTS

COMPANY PROFILE

I. Company History

HANCHANG HEAVY EQUIPMENT CO.,LTD. a company established on June 1, 1978, is the largest company in plant installation and equipments that possesses various models, and pride that it has been leading the heavy equipments industry of Korea.

2020's

- **2021. 05** Constructed a new office building and relocated head office

2010's

- **2019. 05** Registered as construction machinery trade business
- **01** Acquired ISO 45001 (occupational safety and health management system)
- **2018. 03** Expanded fishery (took over Hanchang Fishery Co., Ltd.)
- **2017. 01** Expanded and registered construction machinery apron (Sampyeong-ri)
- **2016. 02** Registered as harbor transport business
- **2015. 11** Introduced new LR11000(1000 ton) first in Korea
- **04** Expanded logistics business (took over Hanchang SMT Co., Ltd.)
- **2013. 09** Established incorporation in Indonesia
- **04** Trained in BAUMA (construction machinery trade fair in German)
- **2012. 12** Introduced LR11350(1350 ton) No. 2 domestically
- **09** Joined International Contractors Association of Korea and Korea Specialty Contractor Financial Cooperative as a member
  Joined Korea Specialty Contractors Association as a member
- **08** Registered as a construction business(a steel structrue construction business)
- **06** Acquired ISO 9001, ISO 14001 and OHSAS 18001 certifications
- **04** Trained in BAUMA (construction machinery trade fair in German)

2000's

- **2009. 05** Introduced LR11350(1350 ton) No. 1 domestically
- **04** Trained in INTERMAT (construction machinery trade fair in France)
- **03** Awarded Citation of Duty to Pay Tax in Good Faith on the day of taxpayers
- **2007. 10** Established Busan corporation in an independent operation system
- **2001. 11** The capital changed to 2 billion won

1990's

- **1996. 09** The head office was relocated(in Hwasan-ri)
- **1995. 04** Registered as a construction machinery rental business.
- **1990. 05** Established Hanchang Heavy Equipment Co., Ltd.

II. VISION

Let's Go!

For One! For World! For Future

THE WORLD'S No.1 COMPANY, GLOBAL LEADER HANCHANG!

For One!

Setting a clear goal and continuously thrive to achieve it. Acquiring strong internal competence and creating a positive and creative company atmosphere united in trust.

For World!

Becoming a company that stands out in the global market through continuous international projects and cyber-marketing, rather than settling as the best in Korea.

For Future!

Nurturing key capabilities as a global leader and creating better value through future-oriented thinking as a global leader.

III. Business Philosophy

"Faithfulness, Diligence, Full effort"

In our company, under the philosophy of "faithfulness, diligence, full effort", all employees thrive to be part of the nation's construction industry through "prioritizing safety, thorough maintenance, and fulfilling respoinsibilities".
We intend to contribute to the nation's key industry by deploying to various construction work utilizing the nation's best machinery such as the latest CRAWLER, MOBILE, and small and large Cranes.

Prioritizing safety

- Before - Tool-Box-Meeting (TBM) and rigging plan review
- During - TBM process, Work zone setup, Disposition of guardians
- After - Strictly cleaning of a site

Thorough maintenance

- Before - Injection-Preliminary inspection of equipment and non-destructive inspection
- During - Injection- Establishment of the measures for immediate responses to equipment failure
- After - Injection-Thorough maintenance through perfect repair

Fulfilling respoinsibilities

- Perfect and responsible construction
- Directly managed customer-service team being operated 365 days
- Goal of a site without accidents and disasters
- Equipment efficiency secured through the establishment of process-by-process equipment plan

IV. Certificates/Licenses

1) Certificate of business registration(Ulsan)

국세청 www.nts.go.kr

(1 / 1)

발급번호 Issuance number	사업자등록증명 Certificate of Business Registration (법인사업자) (Corporate Taxpayer)	처리기간 Processing period
2224-771-4333-510		즉시 Immediately

상호(법인명) Name of company	한창중기 (주) HAN CHANG HEAVY EQUIPMENT CO., LTD.
사업자등록번호 Business registration number	610-81-21136
성명(대표자) Name of representative	김성태 SUNG TAE, KIM
주민(법인)등록번호 Resident(Corporation) registration number	181211-0030903
사업장소재지 Address	울산광역시 울주군 온산읍 내동3길 1 1, Naedong 3-gil, Onsan-eup, Ulju-gun, Ulsan, Korea
개업일 Date of business commencement	1995년(Year) 01월(Month) 05일(Day)
사업자등록일 Date of business registration	1995년(Year) 01월(Month) 18일(Day)
업태 Business type	건설기계도급및대여/제조업 Construction/Manufacturing
종목 Business item	3년초과 건설기계 Renting of Construction or Demolition Equipment with Operator 산업용부품가공제조 Manufacture of Other Work trucks, Lifting and Handling Equipment

공동사업자 Joint business owner	성명(법인명)/ Name(Name of company)	주민(사업자)등록번호 Resident(Business) registration no.
	해당사항 없습니다 (No Data)	

접수번호 Receipt No.	500110552956
담당부서 Department	민원봉사실 Taxpayer Service Center
담당자 Staff in Charge	임경주
연락처 Telephone No.	052-259-0406

위와 같이 증명합니다.
We hereby certify the above.

2015 년 6 월 11 일
Year Month Day

울산세무서장 (인)
Head of Ulsan District Tax Office (Stamp)

국세청

NTS 국세청

IV. Certificates/Licenses

1) Certificate of business registration(Ulsan)

제 148 호
No.148

해 외 건 설 업 신 고 필 증

(Certification of International Contractor)

상 호 : 한창중기(주)

(Name of Company) (Hanchang Heavy Equipment Co., Ltd.)

대 표 자 : 김성태

(Name of Company Representative) (Kim Sung Tae)

신 고 업 종 : 강구조물공사업

(Type of Business) (Steel Structure Works)

영업소 소재지 : 울산광역시 울주군 온산읍 내동3길 1

(Address of Company) (1 Naedong3-gil, Onsan-eup, Ulju-gun, Ulsan, Korea)

해외건설촉진법 제6조 제1항의 규정에 의하여 해외건설업의 신고를 하였음을 증명합니다.

(This is to certify that the above mentioned company is an enrolled international contractor in compliance with Clause 1 under Article 6 of Overseas Construction Promotion Act)

2012년 08월 23일

해 외 건 설 협 회 장

(Chairman of International Contractors Association of Korea)

30306-00211일
'99.1.18개정 승인

해외건설업신고사항(상호, 대표자, 영업소소재지)이 변경된 경우 사유발생일로부터 30일이내 반드시 변경신고를 하시기 바랍니다.

210㎜ x 297㎜
(보존용지(1종)120g/㎡)

IV. Certificates/Licenses

2) ISO certificate (ISO9001)

International Certification Registrar International Certification Registrar International Certification Registrar

Certificate
of Registration

This is to certify that :

HANCHANG HEAVY EQUIPMENT Co., Ltd.

47-18, Jongdong-gil, Onsan-eup, Ulju-gun, Ulsan, Korea

Has been assessed by International Certification Registrar Ltd., in respect of their Quality Management Systems and found to comply with

ISO 9001:2015

Approval is hereby granted for registration providing the rules and conditions relating to certification are observed at all times.

Certification Scope

Subcontract and Rental of Construction Equipment

Certificate Issue Date : 17th June 2021 — Initial Issued Date : 08th June 2012

Expiration Date : 08th June 2024 — Certificate No. : Q360912

※ This certificate is valid by completion of surveillance audit which is conducted within 12 months from the certification date.

The Seal of ICR Limited was hereto affixed in the presence of :

President

IAF ANAB ACCREDITED

- This certificate is intellectual property of ICR.
- This certificate is only valid by completion of surveillance audit which is conducted at least once a year.
- You can verify the authenticity of this certificate on "Certification Confirm" at www.icrqa.com
- If you can not maintain the certification, this certificate shall be returned to ICR.

International Certification ICR REGISTERED FIRM Registrar Ltd.

#ICR Co., Ltd. 112, Hwangeum 3-ro 7beon-gil, Sangchon-eup, Gimpo-si, Gyeonggi-do, Korea http://www.icrqa.com

HANCHANG HEAVY EQUIPMENT

IV. Certificates/Licenses

2) ISO certificate (ISO14001)

International Certification Registrar International Certification Registrar International Certification Registrar

Certificate
of Registration

This is to certify that :

HANCHANG HEAVY EQUIPMENT Co., Ltd.

47-18, Jongdong-gil, Onsan-eup, Ulju-gun, Ulsan, Korea

Has been assessed by International Certification Registrar Ltd., in respect of their Environmental Management Systems and found to comply with

ISO 14001:2015

Approval is hereby granted for registration providing the rules and conditions relating to certification are observed at all times.

Certification Scope

Subcontract and Rental of Construction Equipment

Certificate Issue Date : 17th June 2021 Initial Issued Date : 08th June 2012

Expiration Date : 08th June 2024 Certificate No. : E191212

※ This certificate is valid by completion of surveillance audit which is conducted within 12 months from the certification date.

The Seal of ICR Limited was hereto affixed in the presence of :

President

International Certification ICR REGISTERED FIRM Registrar Ltd.

IAF ANAB ACCREDITED

- This certificate is intellectual property of ICR.
- This certificate is only valid by completion of surveillance audit which is conducted at least once a year.
- You can verify the authenticity of this certificate on "Certification Content" at www.icrqa.com
- If you can not maintain the certification, this certificate shall be returned to ICR.

ICR Co., Ltd. 112, Hwangguum 3-ro 78beon-gil, Yangchon-eup, Gimpo-si, Gyeonggi-do, Korea http://www.icrqa.com

IV. Certificates/Licenses

2) 2) ISO certificate (ISO45001)

International Certification Registrar

Certificate
of Registration

This is to certify that :

HANCHANG HEAVY EQUIPMENT Co., Ltd.

47-18, Jongdong-gil, Onsan-eup, Ulju-gun, Ulsan, Korea

Has been assessed by International Certification Registrar Ltd., in respect of their Occupational Health and Safety Management Systems and found to comply with

ISO 45001:2018

Approval is hereby granted for registration providing the rules and conditions relating to certification are observed at all times.

Certification Scope

Subcontract and Rental of Construction Equipment

Certificate Issue Date : 14th June 2019 — Initial Issued Date : 14th June 2019

Expiration Date : 13th June 2022 — Certificate No. : OHK022619

※ This certificate is valid by completion of surveillance audit which is conducted within 12 months from the certification date.

The Seal of ICR Limited was here to affixed in the presence of :

President

IAF KAB KAB-OC-25

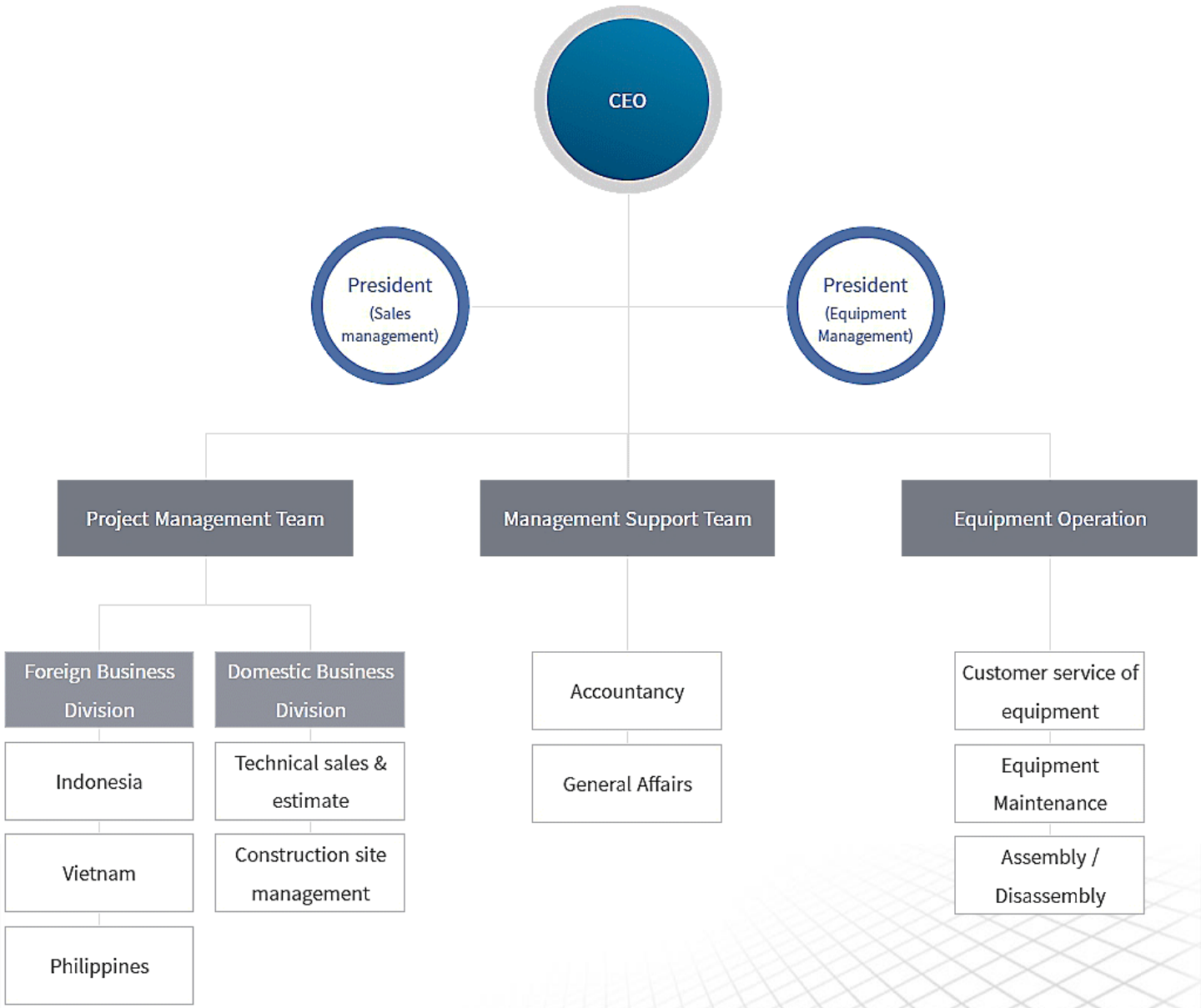
ICR is accredited by Korea Accreditation Board as an Occupational Health & Safety Management System certification body (Accreditation Number KAB-OC-25)

- This certificate is intellectual property of ICR.
- This certificate is only valid by completion of surveillance audit which is conducted at least once a year.
- You can verify the authenticity of this certificate on "Certificate Confirm" at www.icrqa.com
- If you can not maintain the certification, this certificate shall be returned to ICR.

ICR Co., Ltd. 112, Hwangeum 3-ro 78beon-gil, Yangchon-eup, Gimpo-si, Gyeonggi-do, Korea http://www.icrqa.com

International Certification ICR REGISTERED FIRM Registrar Ltd.

V. ORGANIZATION



VI. Partners

1) Shipbuilding

DSME | 현대중공업 | 삼성중공업 | 현대삼호중공업
세진중공업 | DSHI | 한진중공업 | kt submarine
NOY | SUNGJIN GEOTEC | KHAN YOUR LIFE TIME PARTNER IN OIL & GAS INDUSTRY | 현대미포조선
DOOSAN | GEOSEONG SHIPPING & ENGINEERING CO., LTD | DONGBANG | SEBANG 세방(주)

2) Petrochemical

S-OIL | 대한유화주식회사 KOREA PETROCHEMICAL IND. CO., LTD. | Hyundai Oilbank | Hanwha TOTAL
LOTTE CHEMICAL | LG화학 | GS 칼텍스 | ISU 이수화학
SKC | 현대케미칼 | SK 케미칼 | TAEKWANG
금호석유화학 | HYOSUNG | HDC 현대산업개발 | Green 森 Chemical

3) Construction

posco 포스코건설 | posco 포스코플랜텍 | HYUNDAI ENGINEERING & CONSTRUCTION | SAMSUNG 삼성물산
SK E&C | DL Construction | GS E&C | DAEWOO E&C
Hanwha E&C | HYUNDAI STEEL | DOOSAN | 롯데건설
현대엔지니어링 | SAMSUNG ENGINEERING | 대우에스티 | HYUNDAI Rotem

VII. Location

1) Head Office / Ulsan Yard

Address	47-18, Jongdong-gil, Onsan-eup, Ulju-gun, Ulsan, Korea
T E L	+82-52-237-4300~4304
F A X	+82-52-238-0163

2) Busan Office

Address	#1911 Ocean Tower, 203 Haeundae Haeb yeon-ro, U-dong, Haeundae-gu, Busan Korea
T E L	+82-51-740-5980~2
F A X	+82-51-740-5983

EQUIPMENT

I. Equipment List

1) Crawler Crane

Model	Maker	Nation	Ton	Q'ty	Remark
LR11350	LIEBHERR	Germany	1350T	2	
LR11000	LIEBHERR	Germany	1000T	1	
LR1750	LIEBHERR	Germany	750T	5	
LR1550/650	LIEBHERR	Germany	550T	1	
LR1450-K	LIEBHERR	Germany	450T	1	
7700SL	SENNEBOGEN	Germany	320T	2	
SCX2800-2	SUMITOMO	Japan	275T	5	

2) Mobile Crane

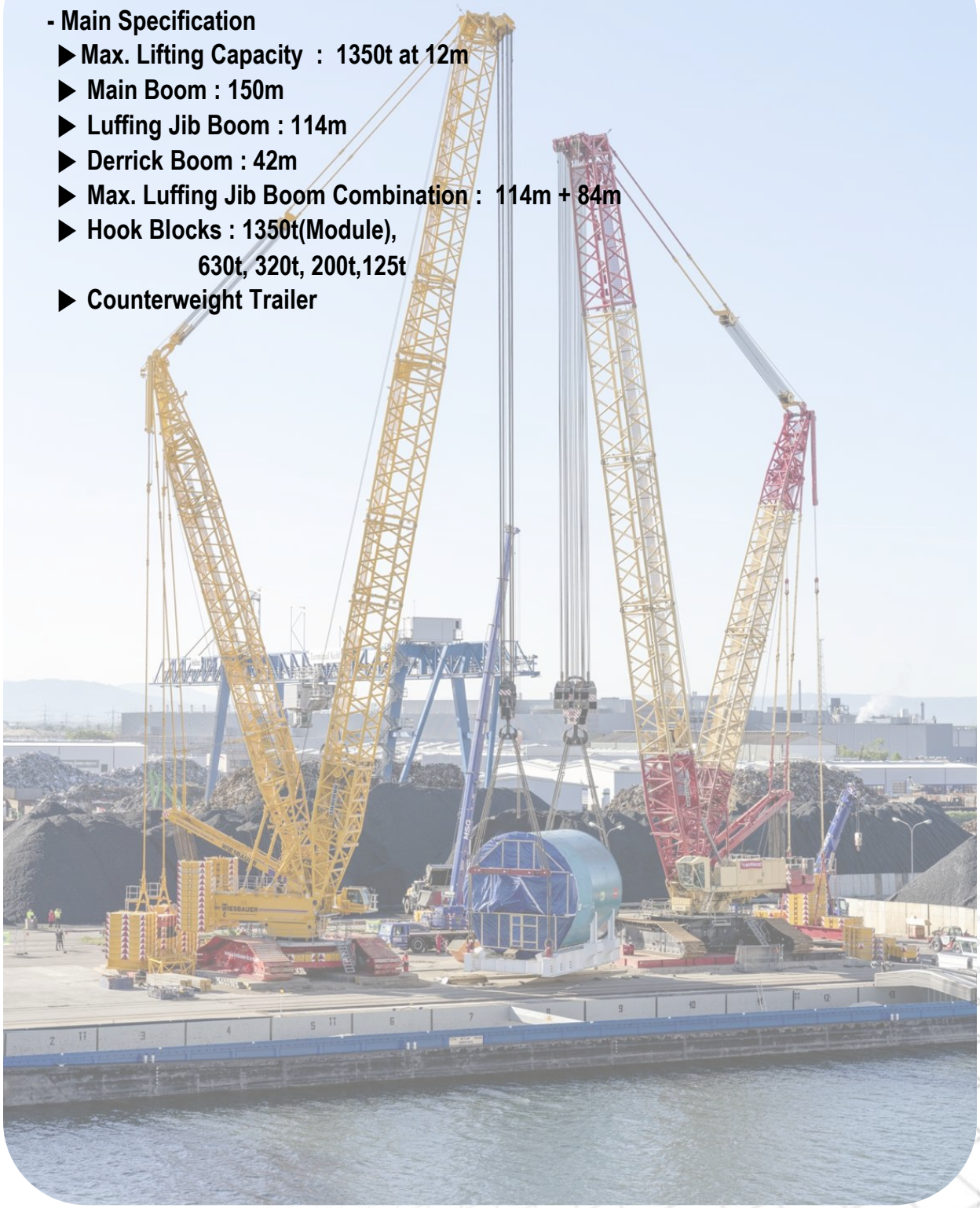
Model	Maker	Nation	Ton	Q'ty	Remark
LTM11200-9.1	LIEBHERR	Germany	1200T	1	
LTM1750-9.1	LIEBHERR	Germany	750T	1	
LTM1500-8.1	LIEBHERR	Germany	500T	1	
LTM1400-7.1	LIEBHERR	Germany	400T	1	
LTM1300-6.2	LIEBHERR	Germany	300T	1	
LTM1250-5.1	LIEBHERR	Germany	250T	1	
LTM1100-5.2	LIEBHERR	Germany	100T	2	

II. Introduction of Equipment

1) LR11350(1350Ton)

◈ Specifications

- Main Specification
  - ▶ Max. Lifting Capacity : 1350t at 12m
  - ▶ Main Boom : 150m
  - ▶ Luffing Jib Boom : 114m
  - ▶ Derrick Boom : 42m
  - ▶ Max. Luffing Jib Boom Combination : 114m + 84m
  - ▶ Hook Blocks : 1350t(Module),
    630t, 320t, 200t,125t
  - ▶ Counterweight Trailer



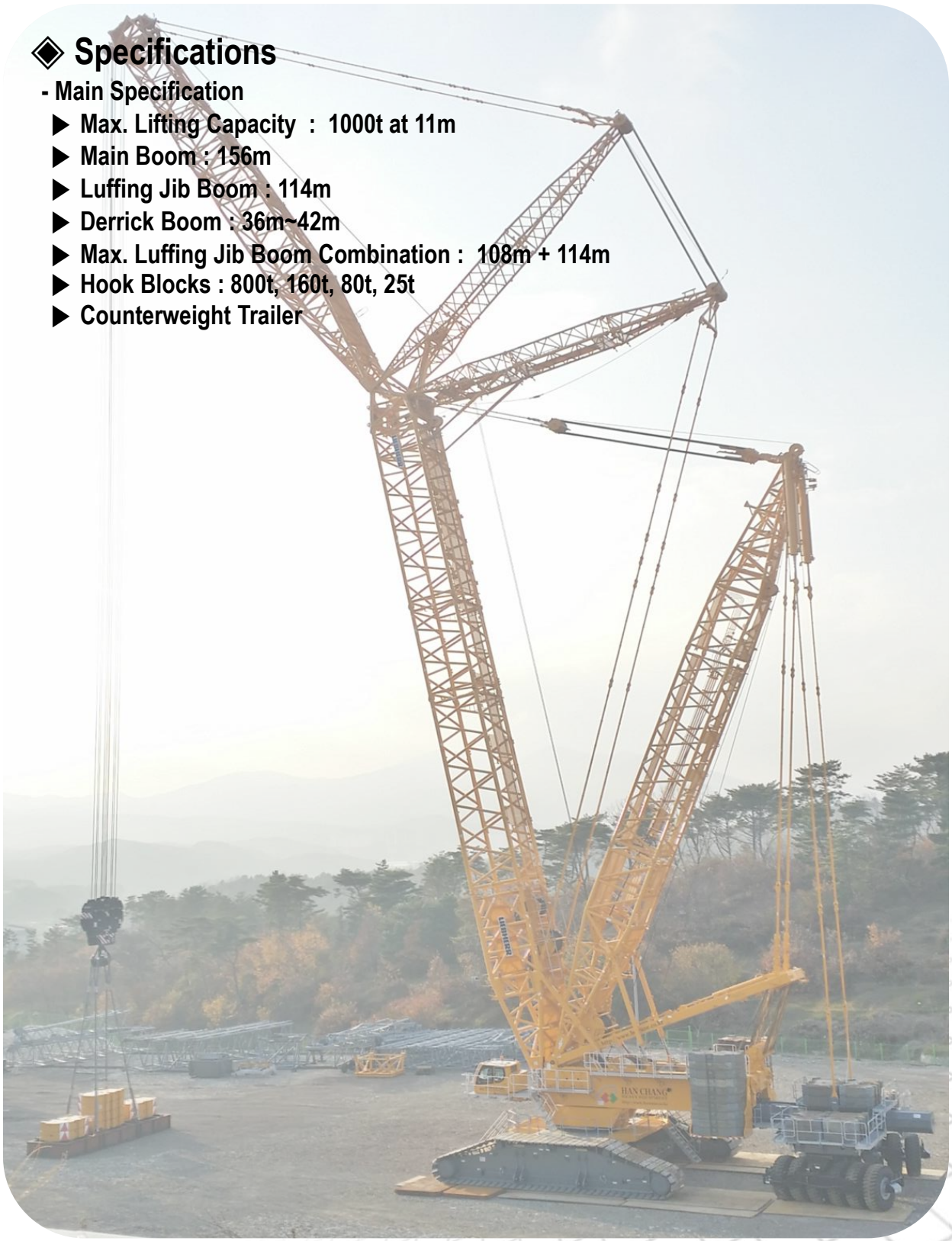
II. Introduction of Equipment

2) LR11000(1000Ton)

◈ Specifications

- Main Specification

- ▶ Max. Lifting Capacity : 1000t at 11m
- ▶ Main Boom : 156m
- ▶ Luffing Jib Boom : 114m
- ▶ Derrick Boom : 36m~42m
- ▶ Max. Luffing Jib Boom Combination : 108m + 114m
- ▶ Hook Blocks : 800t, 160t, 80t, 25t
- ▶ Counterweight Trailer



II. Introduction of Equipment

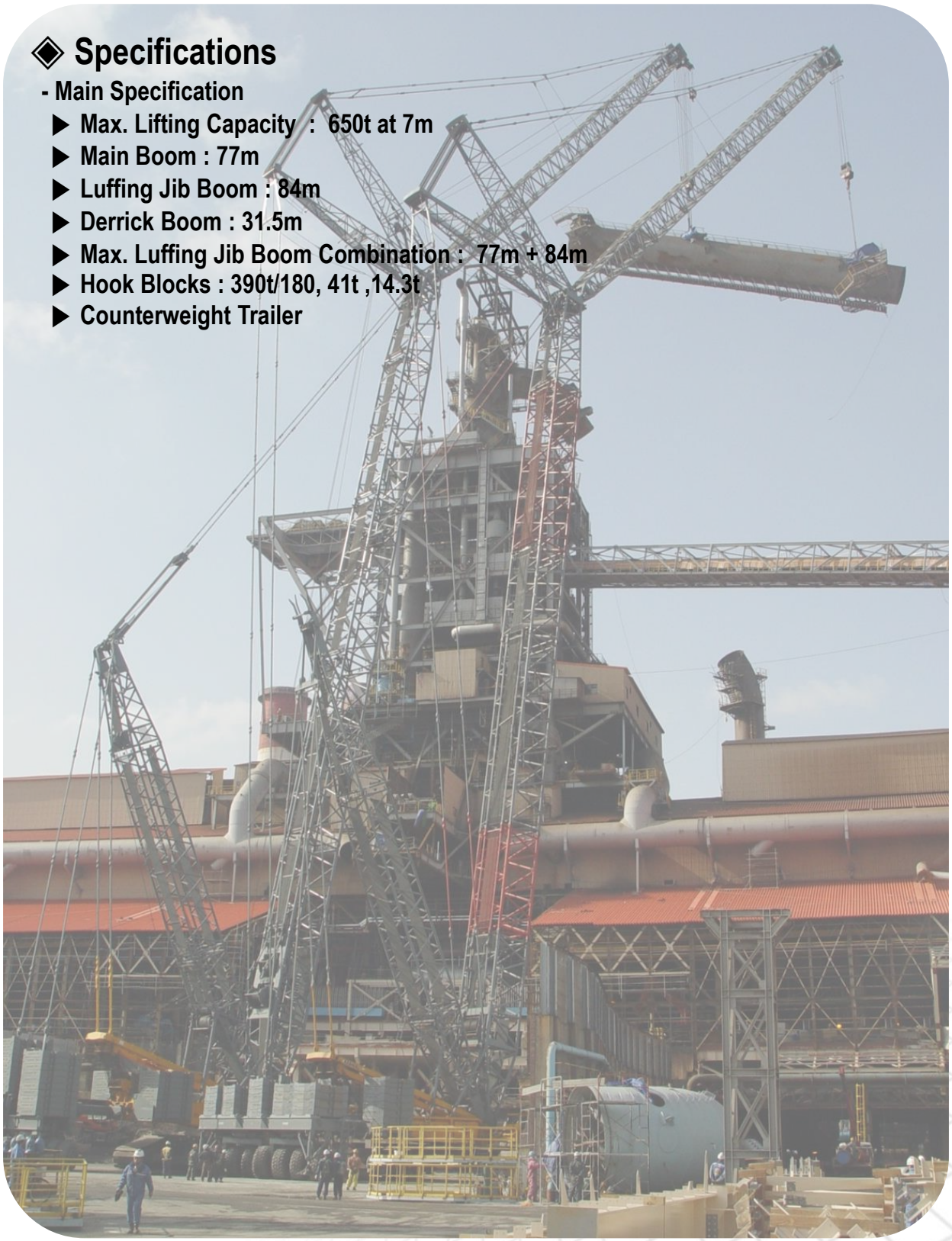
3) LR1750(750Ton)

◈ Specifications

- Main Specification
  - ▶ Max. Lifting Capacity : 750t at 7m
  - ▶ Main Boom : 140m
  - ▶ Luffing Jib Boom : 105m
  - ▶ Derrick Boom : 31.5m
  - ▶ Max. Luffing Jib Boom Combination : 91m + 105m
  - ▶ Hook Blocks : 600t/300, 400t/200t, 125t, 50t ,12.5t
  - ▶ Counterweight Trailer

II. Introduction of Equipment

4) LR1550/650(550Ton)



◈ Specifications

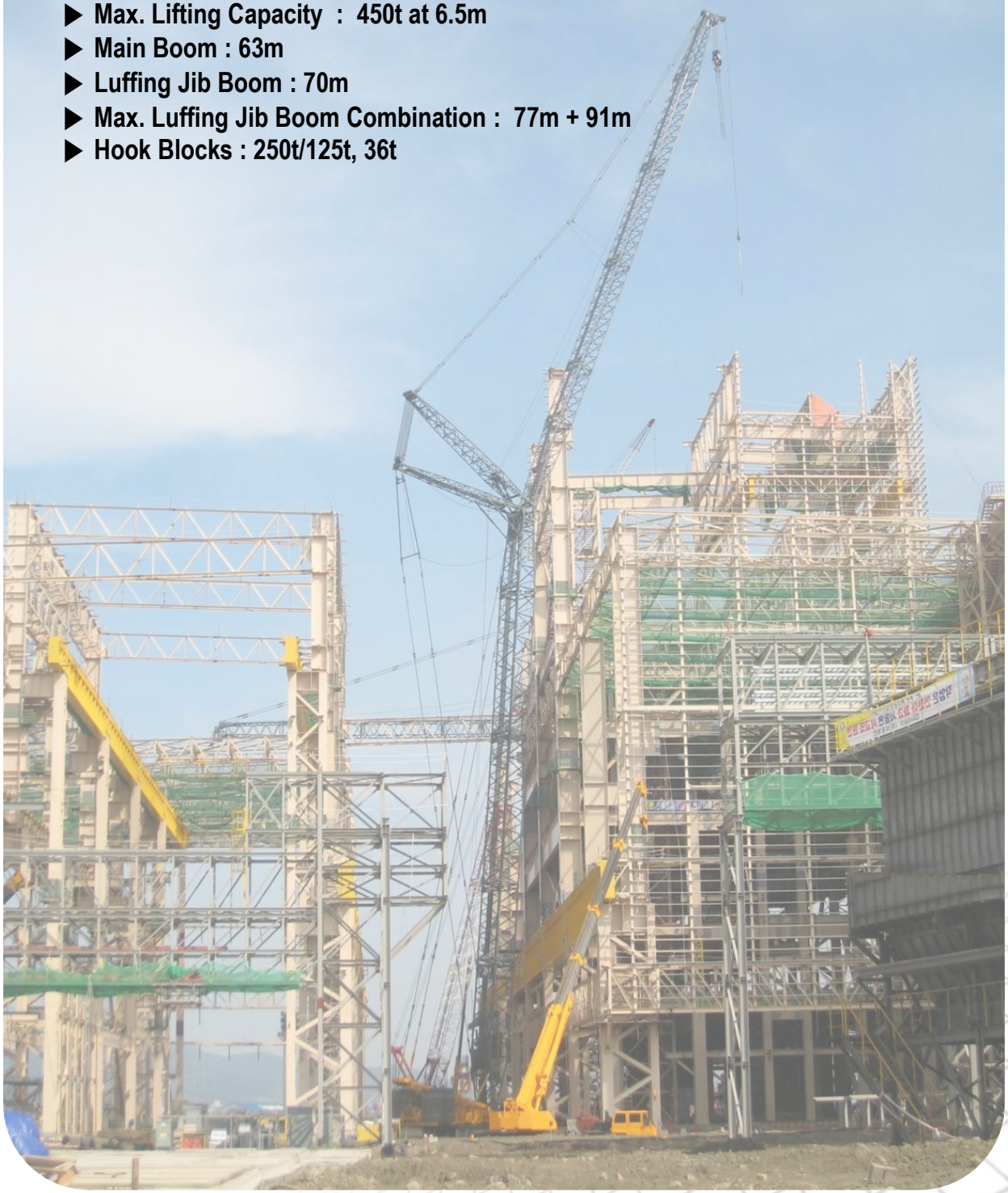
- Main Specification
  - ▶ Max. Lifting Capacity : 650t at 7m
  - ▶ Main Boom : 77m
  - ▶ Luffing Jib Boom : 84m
  - ▶ Derrick Boom : 31.5m
  - ▶ Max. Luffing Jib Boom Combination : 77m + 84m
  - ▶ Hook Blocks : 390t/180, 41t ,14.3t
  - ▶ Counterweight Trailer

II. Introduction of Equipment

5) LR1450-K(450Ton)

◈ Specifications

- Main Specification
  - ▶ Max. Lifting Capacity : 450t at 6.5m
  - ▶ Main Boom : 63m
  - ▶ Luffing Jib Boom : 70m
  - ▶ Max. Luffing Jib Boom Combination : 77m + 91m
  - ▶ Hook Blocks : 250t/125t, 36t

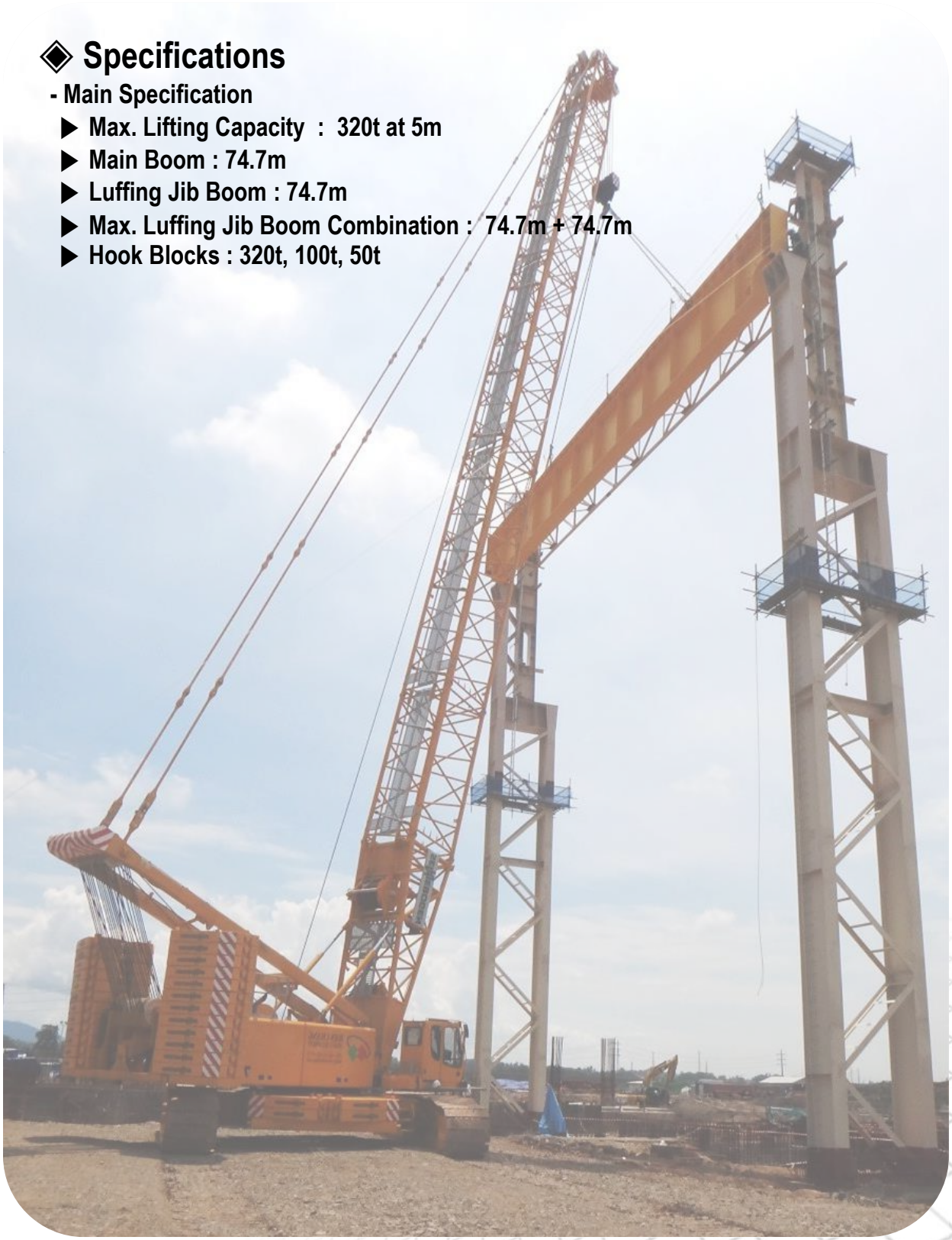


II. Introduction of Equipment

6) 7700SL(320Ton)

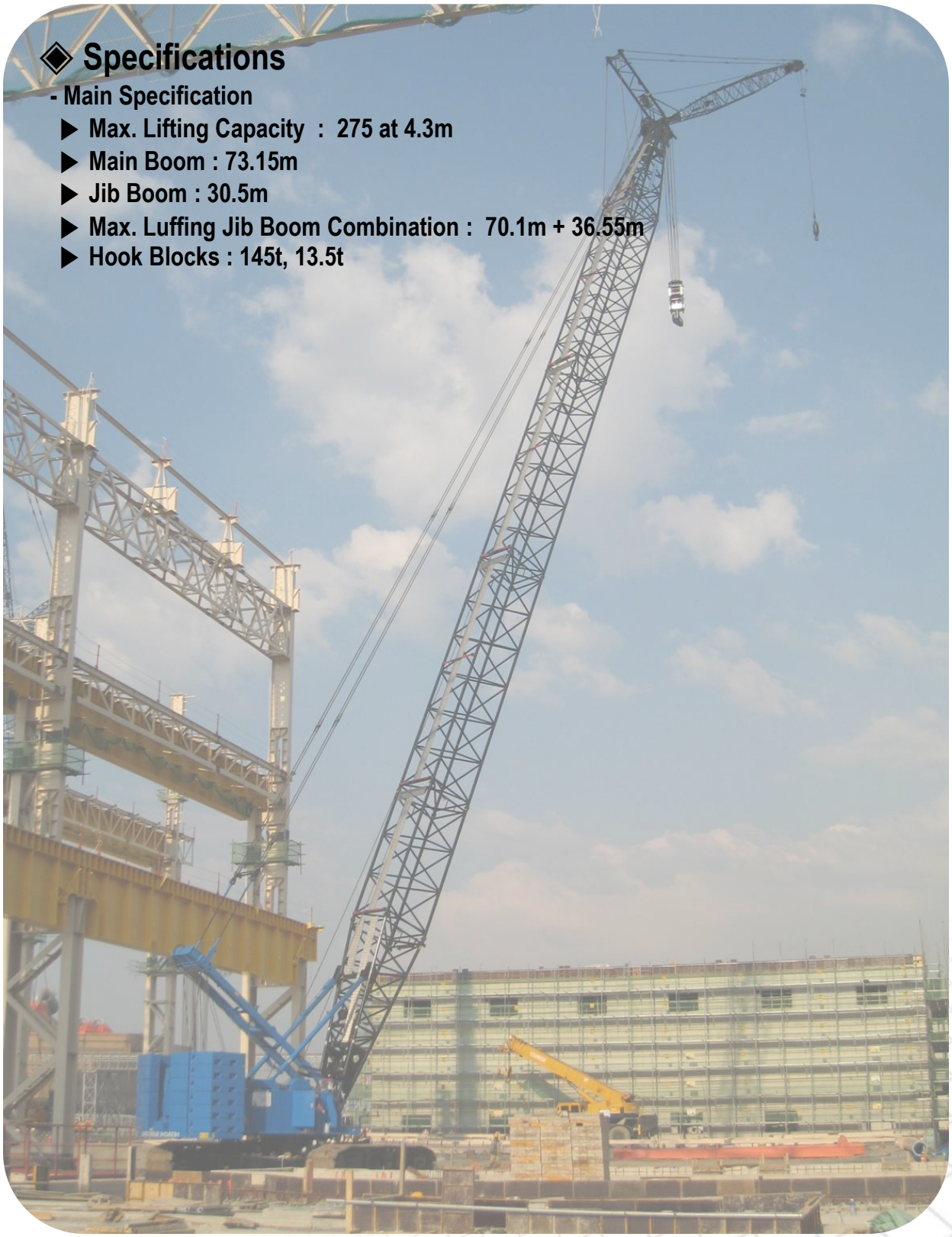
◈ Specifications

- Main Specification
  - ▶ Max. Lifting Capacity : 320t at 5m
  - ▶ Main Boom : 74.7m
  - ▶ Luffing Jib Boom : 74.7m
  - ▶ Max. Luffing Jib Boom Combination : 74.7m + 74.7m
  - ▶ Hook Blocks : 320t, 100t, 50t



II. Introduction of Equipment

7) SCX2800-2(275Ton)



II. Introduction of Equipment

8) Mobile Crane

LTM11200-9.1

LTM1750-9.1

LTM1500-8.1

LTM1400-7.1

II. Introduction of Equipment

8) Mobile Crane

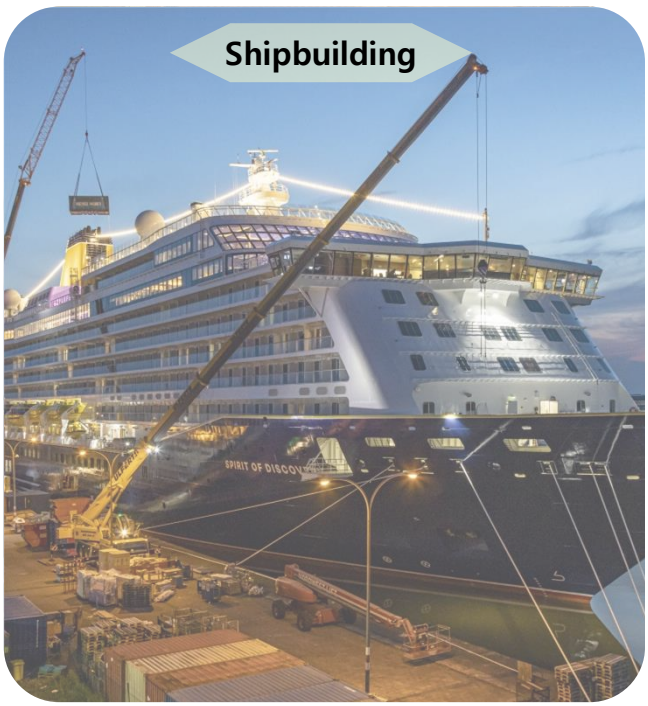
LTM1300-6.2

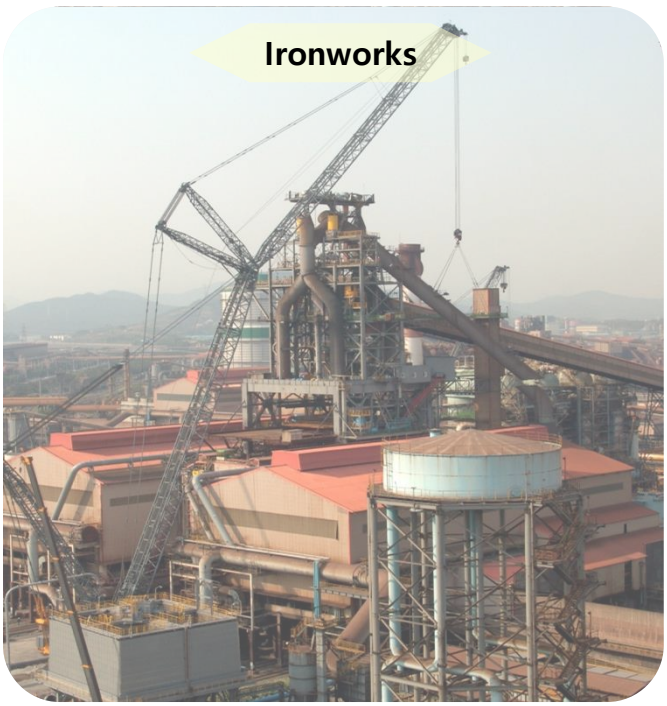
LTM1250-5.1

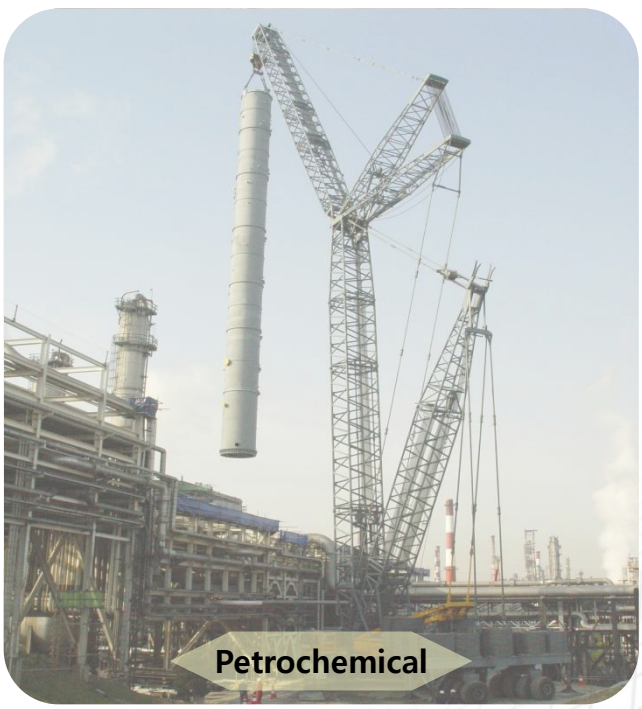
LTM1100-5.1

BUSINESS

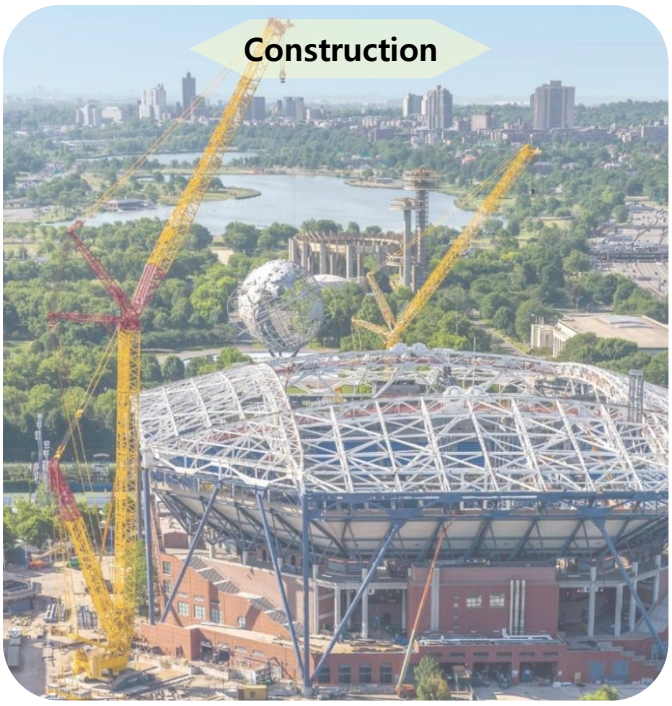
I. Equipment Business

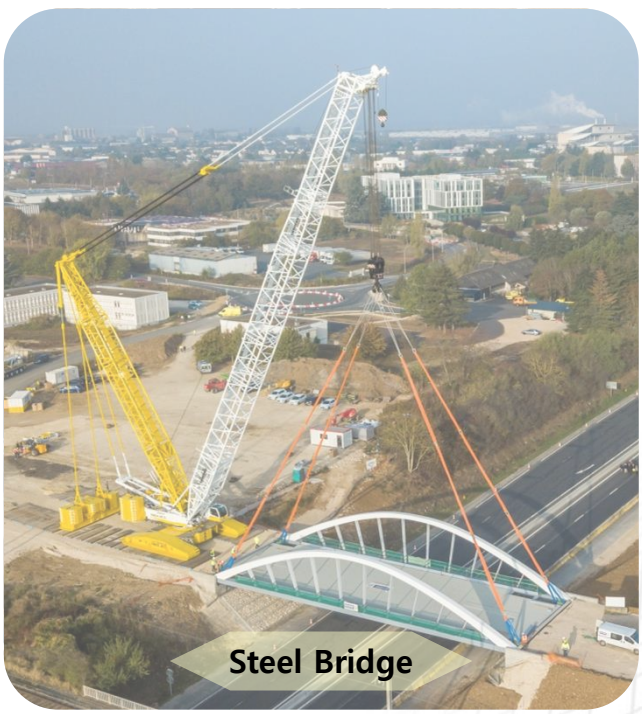






I. Equipment Business





II. Business Performance

1) Shipbuilding

NO	PROJECT NAME	LOCATION	CONTRACTOR	CRANE	DATE of WORK	REMARK
1	Geoje Okpo Shipyard Ship Block Work	Geoje	DSME	LR11000(1000T)	2023	
2	Construction site of Onsan Factory of Shinhan Heavy Industries	Ulsan	DSHI	SCX2800-2(275T)	2021	
3	Ship block work in Yongyeon of Hyundai Mipo Dockyard	Ulsan	HYUNDAI MIPO DOCKYARD	LR1450-K	2020	
4	Construction site of Onsan Factory of Shinhan Heavy Industries	Ulsan	DSHI	LR11350(1350T) LR11000(1000T)	2019	
5	Construction sites of shipyard of Daewoo Shipbuilding & Marine Engineering Okpo	Geoje	DSME	LR1750(750T)	2018	
6	Construction sites of Samsung Heavy Industries Geoje Shipyard	Geoje	Samsung Heavy Inductries	LR11350(1350T)	2017	
7	FCC TURN-OVER work of Hyundai Heavy Industries	Ulsan	HHI	LR1750(750T)	2016	
8	Construction site of Geoje Sadeung Derrick KT submarine installation	Geoje	KT Submarine	LR1750(750T)	2015	
9	Construction site of block work of Hyundai Samho Heavy Industries Mokpo	Mokpo	Hyundai Samho Heavy Industries	LR1800/1000(1000T)	2014	
10	Daewoo Shipbuilding & Marine Engineering Angola AYANG #Project	Angola	DSME	LR1750(750T)	2012	
11	Site of Hyundai Heavy Industries Yongyeon	Ulsan	HHI	LR1750(750T)	2011	
12	Site of STX Heavy Industries Jinhae	Changwon	Postech	LR1750(750T)	2011	
13	Daewoo Shipbuilding & Marine Engineering Romania	Romania	DSME	LR1750(750T)	2009	
14	Daewoo Shipbuilding & Marine Engineering Sangdong	YANTAI	DSME	LR1550/650(550T)	2009	
15	Samsung Heavy Industries Geoje Shipyard	Geoje	Samsung Heavy Inductries	LR1750(750T)	2009	
16	Construction sites of Youngdo & Incheon Duckywards of HJ Shipbuilding & Construction	Busan/Incheon	HHIC	LR1750(750T)	2006	

2) Ironworks

NO	PROJECT NAME	LOCATION	CONTRACTOR	CRANE	DATE of WORK	REMARK
1	Construction site of POSCO Pohang Steel Mill 6 Corks	Pohang	Geomyeong E&C	LR1750(750T)	2022	
2	Construction site of the main equipment of POSCO Gwangyang 4th Blast Furnace	Gwangyang	Samjin Industrial	LR11350(1350T) LR1750(750T)	2022	
3	Construction site of the main equipment of POSCO Gwangyang 3rd Blast Furnace	Gwangyang	Samjin Industrial	LR11350(1350T) LR1750(750T)	2021	
4	Construction site of POSCO Pohang 17 Oxygen System	Pohang	Daeah E&C	LR11000(1000T)	2021	
5	Construction site of the 2nd repair PCI work of POSCO Gwangyang 4th Blast Furnace	Gwangyang	Posco Plantec	LR1750(750T)	2020	
6	Construction site of the 3rd repair work of POSCO Pohang 3rd Blast Furnace	Pohang	Geomyeong E&C	LR11350(1350T) LR1750(750T)	2020	
7	Construction site of the installation of equipment at POSCO Pohang Steam Power Plant	Pohang	BH Tech	LR1750(750T)	2019	
8	Construction site of the installation of Hyundai Steel Incheon Factory Overhead Crane	Incheon	Hwabin ENG	LR1750(750T)	2019	
9	Construction site of the repair of Dangjin Blast Furnace of Hyundai Steel	Dangjin	Hyundai Rotem	LR1750(750T)	2018	
10	Construction site of the installation of Suncheon Cold-rolled 3CGL of Hyundai Steel	Suncheon	Hyundai Engineering &Steel Industries	LR1750(750T) 7700SL(320T)	2016	
11	Construction site of Intergated Steel Mill of POSCO Indonesia	Indonesia	Posco E&C	LR1750(750T) 외 多	2015	
12	Construction site of the installation of POSCO Finex 2nd	Pohang	Posco E&C	LR1750(750T)	2013	
13	Construction site of the 2nd repair of POSCO Poshang 4th Blast Furnace	Pohang	Posco E&C	LR11350(1350T) LR1750(750T)	2010	
14	POSCO Gwangyang 5 Coke CDQ	Gwangyang	Posco E&C	LR1750(750T)	2010	
15	Construction site of POSCO Pohang New Steel Mill	Pohang	Posco E&C	LR1750(750T)	2010	
16	Construction site of the 4th repair work of POSCO Gwangyang Hot blast stove 2nd Blast Furnace	Gwangyang	Posco E&C	LR1750(750T)	2009	
17	POSCO Gwangyang Plate & Steel Mill	Gwangyang	Posco E&C	LR1750(750T)	2009	
18	Construction site of the 3rd repair of POSCO Gwangyang 1 Steel Mill	Gwangyang	Posco E&C	LR1550/650(550T)	2009	
19	POSCO Pohang Finex 1st	Pohang	Posco E&C	LR1750(750T)	2007	
20	Construction site of the 3rd repair of POSCO Gwangyang3 Steel Mill	Gwangyang	Posco E&C	LR1750(750T)	2007	
21	Construction site of POSCO Gwangyang No.6 CGL	Gwangyang	Posco E&C	LR1550/650(550T)	2006	

II. Business Performance

3) Plants

NO	PROJECT NAME	LOCATION	CONTRACTOR	CRANE	DATE of WORK	REMARK
1	Construction site of Daehan Yuhwa Onsan Factory KPIC NEO-II & KBD Project	Ulsan	GS E&C	LR11350(1350T)	2022	
2	Linde Korea Pyeongtaek Cold Box 2nd installation work	Pyeongtak	Hanyang ENG	LR11000(1000T)	2022	
3	GS Caltex Yeosu Plant 2 Replacement of Aging Equipment	Yeosu	Yuhangisul	LR11350(1350T) LR11000(1000T)	2022	
4	Site of Gangneung Anin Thermal Power Plant	Gangneung	Geomyeong E&C	LR1750(750T)	2021	
5	Site of the offshore wind power in Vietnam	Vietnam	MIN HOANG	LR11350(1350T)	2021	
6	Construction of Yeongheung Wind Power Plant	Incheon	DOOSAN HEAVY IND USTRIES	LR1750(750T)	2021	
7	Replacement work of Yeongwang Nuclear power plants no. 3 and no. 4 SGR	Yeongwang	DL E&C	LR11350(1350T)	2021	
8	Installation work of Linde Korea Pyeongtaek Cold Box	Pyeongtaek	Hanyang eng	LR11000(1000T)	2021	
9	Daehan-yuhwa Onsan Plant KSA Project	Ulsan	KHAN	LR1750(750T)	2021	
10	New construction of SK hynix Icheon Smart Energy Center	Icheon	SK E&C	LR1750(750T) 7700SL(320T)	2020	
11	Construction sites for new establishment of Yeosu GS Caltex MFC/LG Chem	Yeosu	GS E&C LG ServeOne	LR11000(1000T) LR1750(750T)	2020	
12	Construction site of Shin-Kori Nuclear power plants no. 5 and no. 6.	Ulsan	SAMSUNG C&T	LR11350(1350T) LR1750(750T)	2020	
13	Construction site of Samcheok Thermal Power Plant no. 1 and no. 2.	Samcheok	GEMYEONG E&C	LR11350(1350T)	2020	
14	Construction site of SK Goseong Hi Thermal Power Plant no. 1 and no. 2.	Goseong	SK E&C	LR1750(750T)	2019	
15	S-OIL Onsan Factory RUC Project	Ulsan	DL E&C	LR11350(1350T) LR1750(750T)	2017~2018	
16	Yeosu Lotte Chemical H-NC3 Project	Yeosu	Samsung Engineering	LR11350(1350T)	2017	
17	Construction site of Samcheok Green Power no. 1 and no. 2.	Samcheok	DAEWOO E&C	LR1750(750T)	2015	
18	Construction site of Bukpyeong Thermal Power Plant	Samcheok	STX Heavy Industries	LR11350(1350T)	2014	
19	Hyundai Oilbank Daesan #1LBO Project	Daesan	HYUNDAI E&C	LR11350(1350T) LR1750(750T)	2014	
20	Ulsan SK New PX Project	Ulsan	SK E&C	LR1750(750T)	2013	
21	Construction site of Shin Uljin Nuclear Power Plant no. 1 and no. 2.	Uljin	HYUNDAI E&C	LR11350(1350T) LR1750(750T)	2012	
22	Honam Petrochemical HPC EM2 Project	Yeosu	Samsung Engineering	LR11350(1350T) LR1750(750T)	2011	
23	Hyundai Oilbank Daesan #2 HOU Project	Daesan	HYUNDAI E&C	LR11350(1350T) LR1750(750T)	2010	
24	Ulsan SK Energy NEP Project	Ulsan	SK E&C	LR1750(750T)	2010	
25	S-Oil Onsan Factory SEP Project	Ulsan	S-OIL	LR1750(750T)	2009	
26	Construction site of work in Yeosu Chemical Complex	Yeosu	SK E&C	LR1550/650(550T)	2009	

II. Business Performance

4) Construction

NO	PROJECT NAME	LOCATION	CONTRACTOR	CRANE	DATE of WORK	REMARK
1	Construction of Samsung Semiconductor's Godeok P3 Complex in Pyeongtaek	Pyeongtak	Samsung Engineering	LR11350(1350T)	2022	
2	Construction of Anseong-Guri Expressway Section 9 Installation	Gwangju	Bugang Steel	LR1750(750T)	2022	
3	Construction site of the distribution center in Wonchang-dong, Incheon	Incheon	EG Global	LR1750(750T)	2022	
4	New construction of Smart Hub Logistics Center in Daejeon	Daejeon	SAMSUNG C&T	LR1550/650(550T)	2021	
5	New construction Dudong HY Logistics Center in Changwon	Changwon	DAEHAN ENGINEERING & CONSTRUCTION	7700SL(320T)	2021	
6	Construction of KCC Incheon logistics center	Incheon	EG Global	LR1750(750T)	2021	
7	Construction site of the installation of Busan Bukhang Bridge 1 and Bridge 3	Busan	DAESUNG STEEL BRIDGE	LR1750(750T)	2021	
8	Samsung Pyeongtaek Semiconductor FAB #3 Project	Pyeongtak	SAMSUNG C&T	LR1750(750T) SCX2800-2(275T)	2020	
9	HSVC OL1 Project	Vietmam	E TEC E&C	LR11350(1350T)	2020	
10	New construction of POSCO Yangji Logistics Center	Yongin	HANSUNG PC	LR1750(750T)	2020	
11	Construction of the installation of Samsung Pyeongtaek Semiconductor FAB #2 Over Bridge	Pyeongtak	SAMSUNG C&T	LR11350(1350T) LR1750(750T)	2019	
12	Construction of Naju-Damyang Outer Circular Expressway	Damyang	DAESEUNG ENGINEERING	LR11350(1350T)	2019	
13	New construction of Dongwon Logistics Center	Yongin	Yonhap	LR1750(750T)	2018	
14	Construction site of Incheon International Airport of the 2nd Government Complex	Incheon	HANJIN HEAVY INDUSTRIES	LR1550/650(550T)	2016	
15	Extension construction of Ulsan City Park Mall	Ulsan	KCC Engineering &Construction	7700SL(320T) SCX2800-2(275T)	2015	
16	Philippines ARENA Project	Philippines	Hanwha Engineering &Construction	LR1750(750T)	2013	
17	Construction of the installation of Russkiy Island Bridge, Vladivostok, Russia	Russia	SARENS NV	LR11350(1350T)	2011	
18	Construction site of Subic of Hanjin Heavy Industries & Construction	Philippines	HANJIN HEAVY INDUSTRIES	LR1750(750T)	2006	

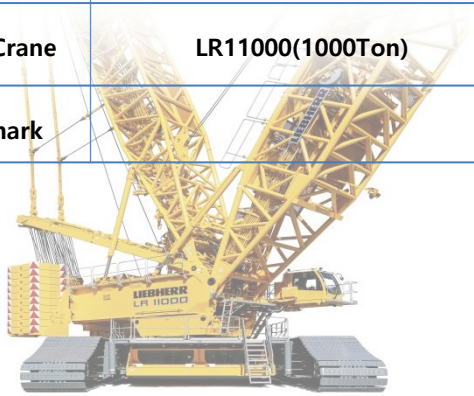
5) Wind Power

NO	PROJECT NAME	LOCATION	CONTRACTOR	CRANE	DATE of WORK	REMARK
1	Construction of the installation of Shinhung Wind Power Plant	Muan	CNPLUS	LR11350(1350T)	2022	
2	Construction of the installation of Yeongyang Wind Power Plant	Yeongyang	KWANGJIN GLOVIS	LR1750(750T)	2022	
3	Construction of the installation of Pyeongchang Wind Power Plant	Pyeongchang	KWANGJIN GLOVIS	LR1750(750T)	2022	
4	Construction of the installation of Taebaek Wind Power Plant	Taebaek	Future Construction	LR1750(750T)	2022	
5	Construction of the installation of Wondong Wind Power Plant	Yangsan	DONGBANG	LR1750(750T)	2022	
6	Construction site of the offshore wind power plant in Vietnam	Vietnam	MIN HOHANG	LR11350(1350T)	2021	
7	Replacement construction of Yeongheung Wind Power Plant	Incheon	DOOSAN HEAVY INDUSTRIES	LR1750(750T)	2021	
8	Construction of the installation of Yeongyang Wind Power Plant	Yeongyang	KWANG JIN GLOVIS	LR1750(750T)	2019	
9	Construction of the installation of Shinan Wind Power Plant	Shinan	DONGKUK S&C	LR1750(750T)	2018	
10	Construction of the installation of Jeju Woljeong Wind Power Plant	Jeju	Jeju Special Engineering	LR1750(750T)	2017	
11	Construction of the installation of Jeju Gashiri Wind Power Plant	Jeju	DONGBANG	LR1750(750T)	2014	
12	Construction of the installation of Muju Wind Power Plant	Muju	HYUNDAI HEAVY INDUSTRIES	LR1750(750T)	2011	
13	Construction of the installation of Taebaek Gwinemi Village Wind Power Plant	Taeba다	HYUNDAI HEAVY INDUSTRIES	LR1550/650(550T)	2011	

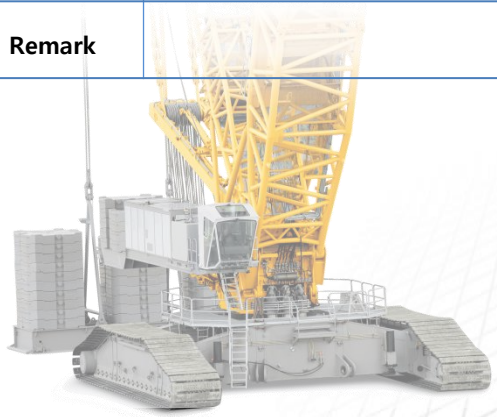
III. Business Performance Data

1) Shipbuilding

Project	DSHI SHIP BLOCK WORK
Contractor	DSHI
Location	Ulsan
Period	2019.08~
Main Crane	LR11350(1350Ton)
Tail Crane	LR11000(1000Ton)
Remark	



Project	HHI CMC Project
Contractor	HHI
Location	Ulsan
Period	2012.10~
Main Crane	LR11350(1350Ton)
Tail Crane	-
Remark	



III. Business Performance Data

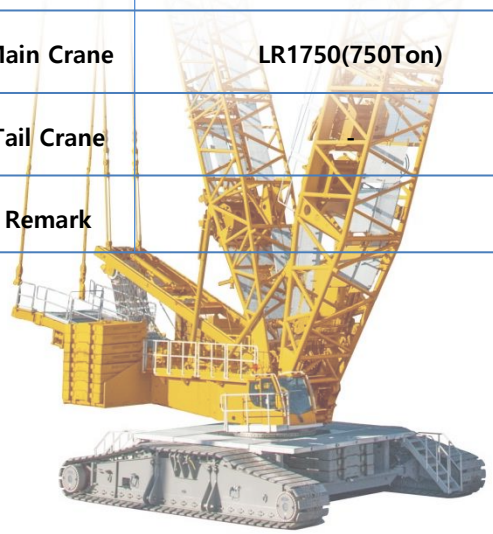
1) Shipbuilding

Project	Doosan Vina Vietnam RMQC
Contractor	Doosan Heavy Industries
Location	Vietnam
Period	2016.11~
Main Crane	LR1550/650(550Ton)
Tail Crane	SCX2800-2(275Ton)
Remark	

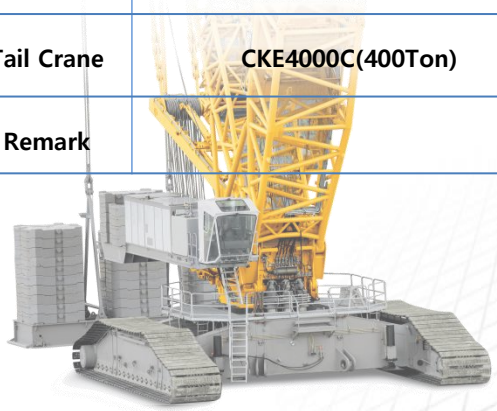
III. Business Performance Data

1) Shipbuilding

Project	Shinan Heavy Industries Goliath Crane Installation
Contractor	Shinan Heavy Industries
Location	Mokpo
Period	2011.05~
Main Crane	LR1750(750Ton)
Tail Crane	-
Remark	



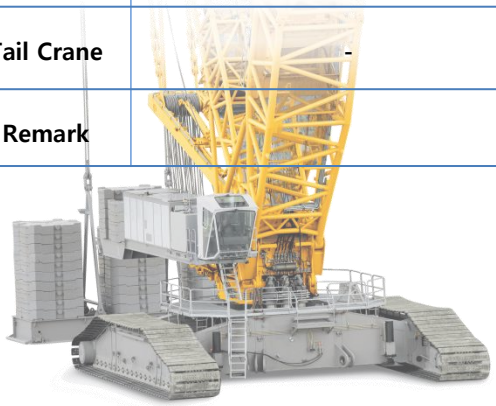
Project	Sungjin Geotech 4P1 Turn Over Work
Contractor	Sungjin Geotech
Location	Ulsan
Period	2010.08~
Main Crane	LR11350(1350Ton)
Tail Crane	CKE4000C(400Ton)
Remark	



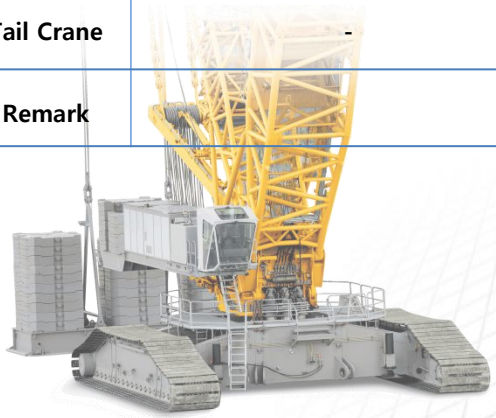
III. Business Performance Data

2) Ironworks

Project	Posco Gwangyang 3 Blast Furnace Body Facility Work
Contractor	Posco E&C
Location	Gwangyang
Period	2019.04~
Main Crane	LR11350(1350Ton)
Tail Crane	-
Remark	



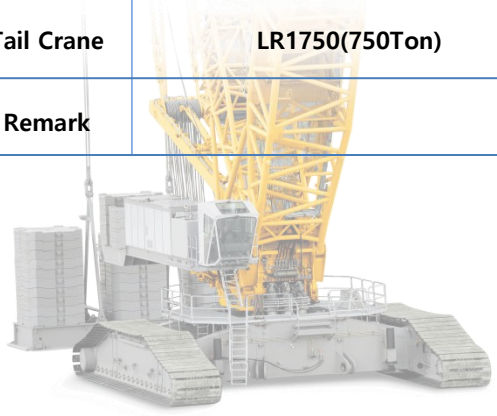
Project	POSCO Gwangyang 4 blast furnace D.C installation
Contractor	Posco E&C
Location	Gwangyang
Period	2010.10~
Main Crane	LR11350(1350Ton)
Tail Crane	-
Remark	



III. Business Performance Data

2) Ironworks

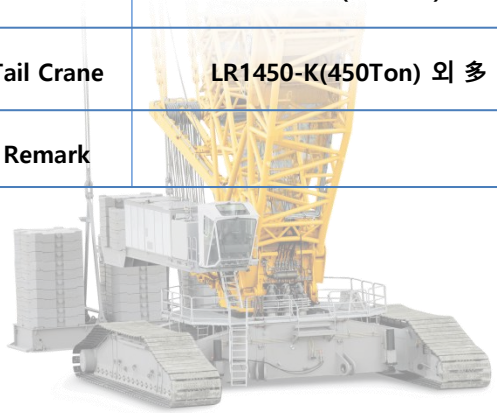
Project	POSCO Pohang 2 blast furnace renovation work
Contractor	Posco E&C
Location	Pohang
Period	2010.04~
Main Crane	LR11350(1350Ton)
Tail Crane	LR1750(750Ton)
Remark	



III. Business Performance Data

2) Ironworks

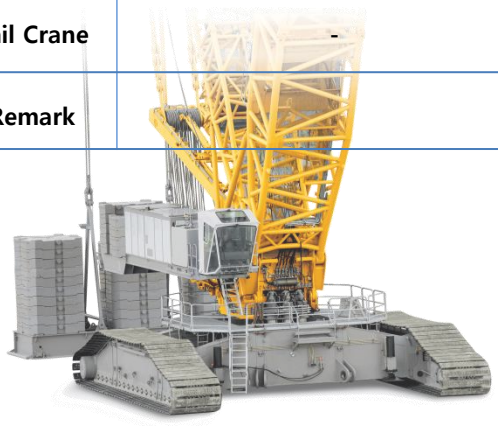
Project	Posco integrated steelworks phase 1 construction
Contractor	Posco E&C
Location	Indonesia
Period	2012.01~2015.04
Main Crane	LR1750(750Ton)
Tail Crane	LR1450-K(450Ton) 외 多
Remark	

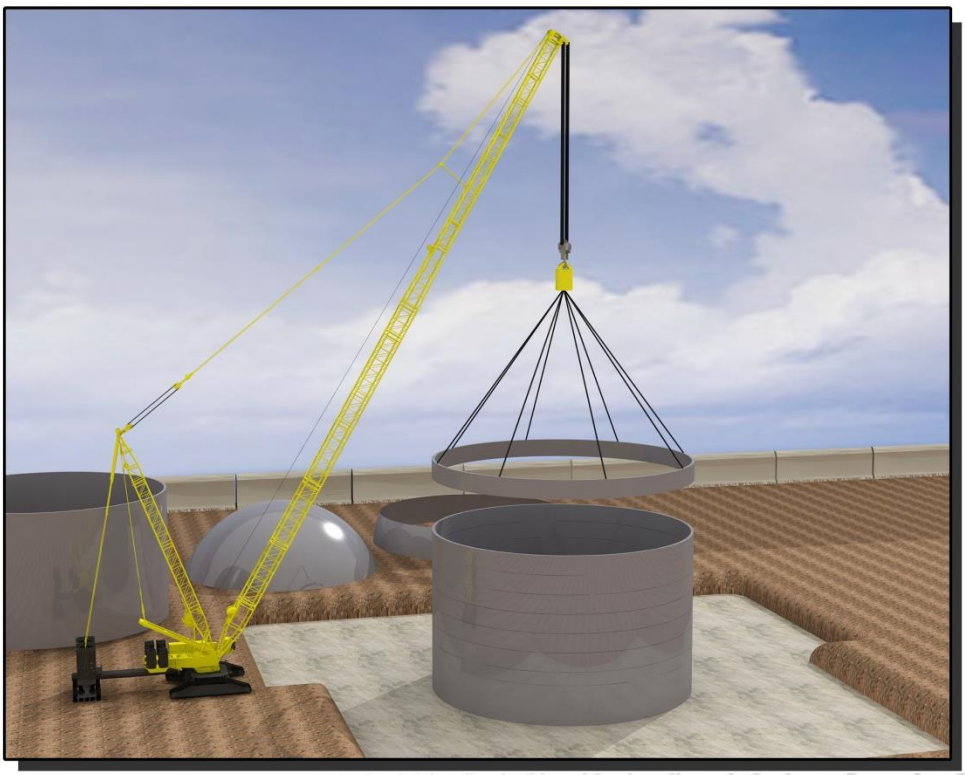


III. Business Performance Data

3) Plants (nuclear power plant)

Project	Shinhanul Nuclear Power Plant Units 1 and 2 site
Contractor	HDEC
Location	Uljin (Gyeongbuk)
Period	2013.01~2015.06
Main Crane	LR11350(1350Ton)
Tail Crane	-
Remark	

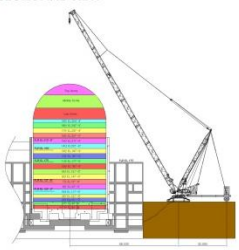




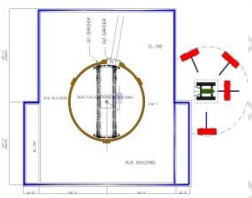
●CRANE LOADING CHART

01	CRANE MODEL	LR11350(C/C1350Ton)
	MAIN BOOM LENGHT	126m
	LUFFING BOOM LENGHT	-
	RIGGING TYPE	SLDBW Type
	OPERATING RADIUS	68m
	CHART CAPACITY	237ton
	HOOK BLOCK	320ton Hook
02	EQUIPMENT NO.	Dome(3pcs)
03	WEIGHT OF EQUIPMENT	153ton
	WEIGHT OF OTHER	15ton
04	TOTAL LIFT WEIGHT	168ton
05	% of CHART CAPACITY	70.9%

●SECTIONAL VIEW



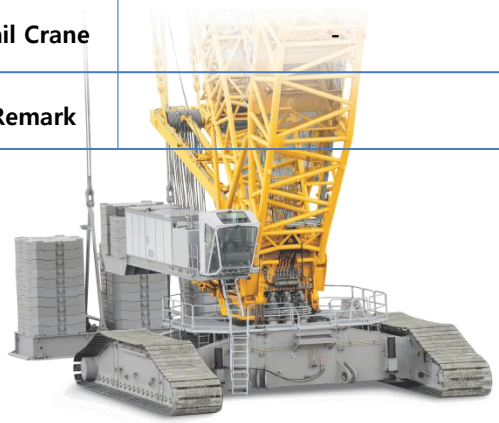
●PLAN DRAWING



III. Business Performance Data

3) Plants (thermal power plant)

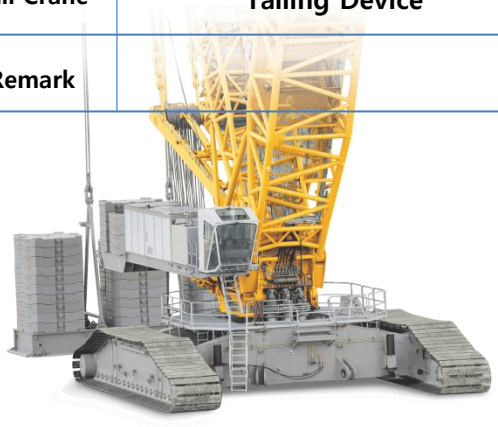
Project	Bukpyeong Thermal Power Plant Heavy Girder Installation
Contractor	STX heavy industry
Location	Samcheok
Period	2014.10~
Main Crane	LR11350(1350Ton)
Tail Crane	-
Remark	



III. Business Performance Data

3) Plants (petrochemical)

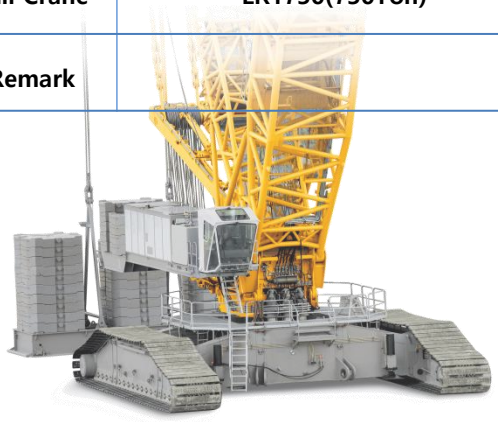
Project	Hyundai Oilbank #1 LBO Project
Contractor	HDEC
Location	Daesan
Period	2014.04~
Main Crane	LR11350(1350Ton)
Tail Crane	Tailing Device
Remark	



III. Business Performance Data

3) Plants (petrochemical)

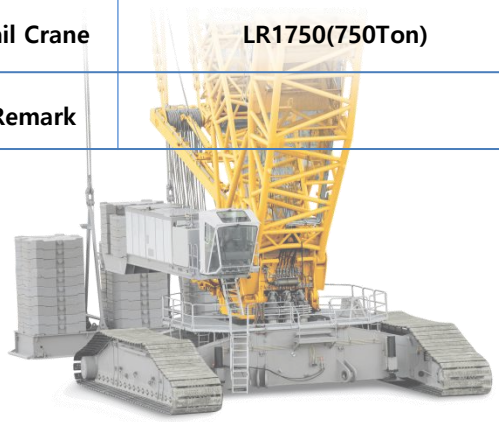
Project	Hyundai Oilbank #2 HOU Project
Contractor	HDEC
Location	Daesan
Period	2010.10~
Main Crane	LR11350(1350Ton)
Tail Crane	LR1750(750Ton)
Remark	



III. Business Performance Data

3) Plants (petrochemical)

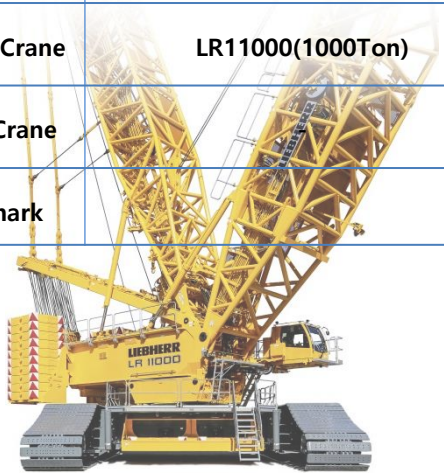
Project	Honam Petrochemical HPCEM2 Project
Contractor	Samsung eng
Location	Yeo su
Period	2011.04~
Main Crane	LR11350(1350Ton)
Tail Crane	LR1750(750Ton)
Remark	



III. Business Performance Data

3) Plants (petrochemical)

Project	Linde Korea Godeok Cold Box installation
Contractor	Hanyang eng
Location	Pyeongtaek
Period	2021.05~
Main Crane	LR11000(1000Ton)
Tail Crane	
Remark	

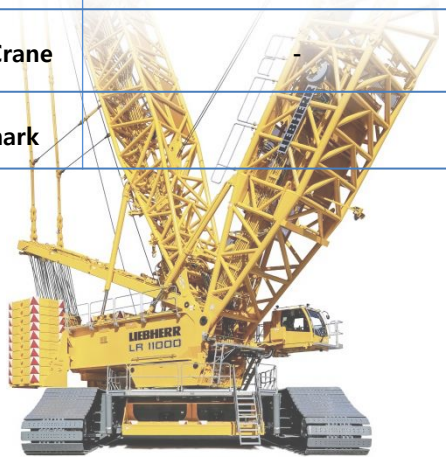


Project	GS Caltex MFC New Project
Contractor	GS e&c
Location	Yeo su
Period	2020.01~
Main Crane	LR11000(1000Ton)
Tail Crane	-
Remark	

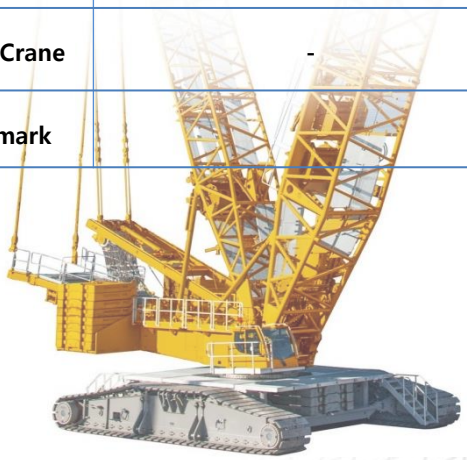
III. Business Performance Data

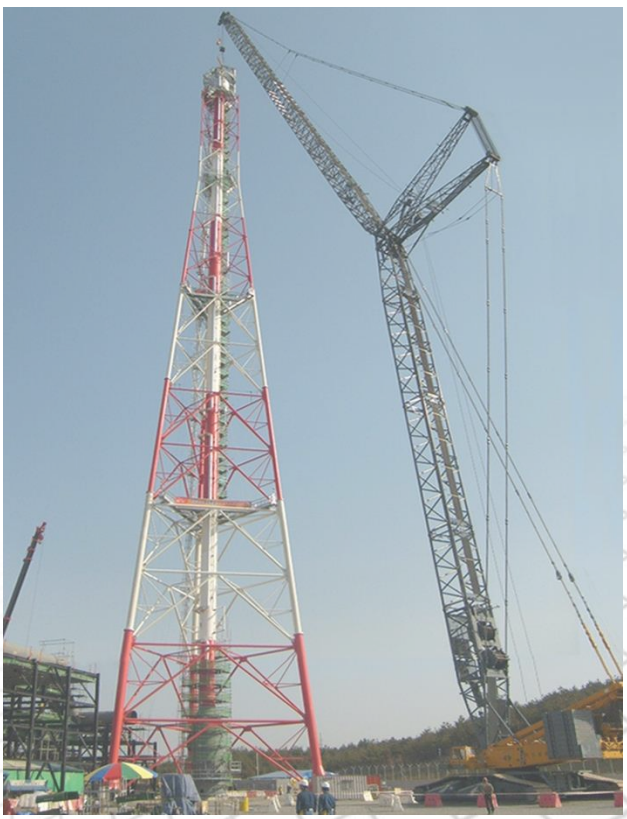
3) Plants (petrochemical)

Project	LG Chem Y2C Project
Contractor	LG Subone
Location	Yeo su
Period	2020.02~
Main Crane	LR11000(1000Ton)
Tail Crane	-
Remark	



Project	LG Chem Y2C Project
Contractor	LG Subone
Location	Yeo su
Period	2020.04~
Main Crane	LR1750(750Ton)
Tail Crane	-
Remark	

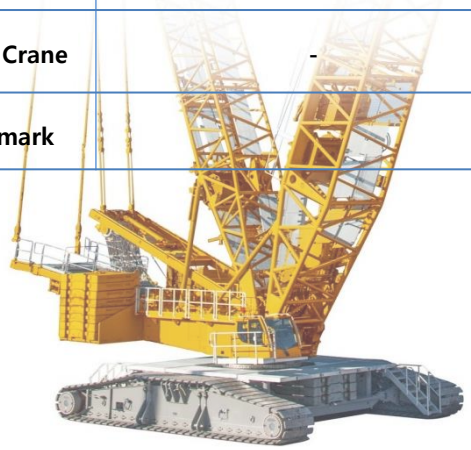




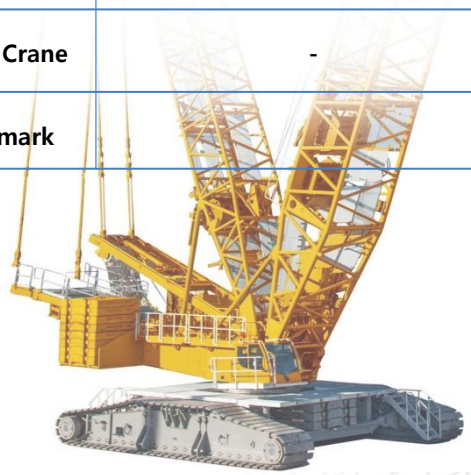
III. Business Performance Data

3) Plants (petrochemical)

Project	SK New PX Project
Contractor	SK e&c
Location	Ulsan
Period	2013.03~
Main Crane	LR1750(750Ton)
Tail Crane	-
Remark	



Project	SK No.6 MDU Project
Contractor	SK e&c
Location	Ulsan
Period	2010.05~
Main Crane	LR1750(750Ton)
Tail Crane	-
Remark	



III. Business Performance Data

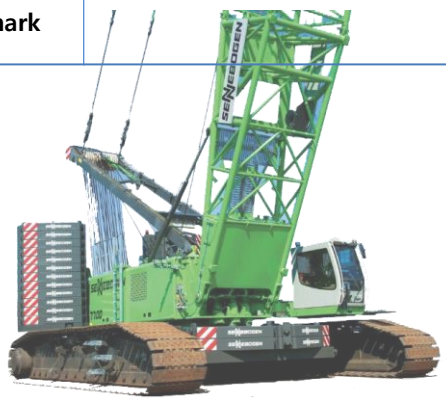
3) Plants (petrochemical)

Project	S-OIL RUC Project
Contractor	Yeonggwang
Location	Ulsan
Period	2018.02~
Main Crane	LR1750(750Ton)
Tail Crane	-
Remark	

III. Business Performance Data

3) Plants (petrochemical)

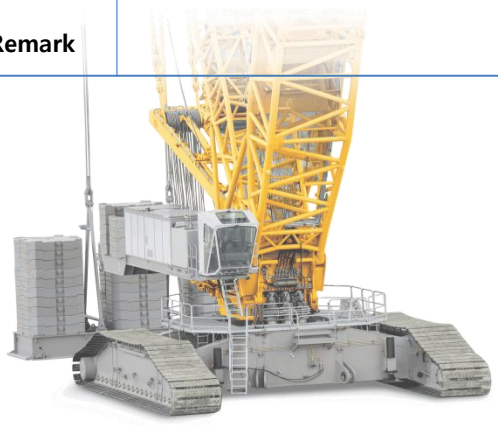
Project	SK Hynix Smart Energy Center
Contractor	SK e&c
Location	Icheon (Gyeonggi-do)
Period	2020.10~
Main Crane	7700SL(320Ton)
Tail Crane	-
Remark	



III. Business Performance Data

4) Construction

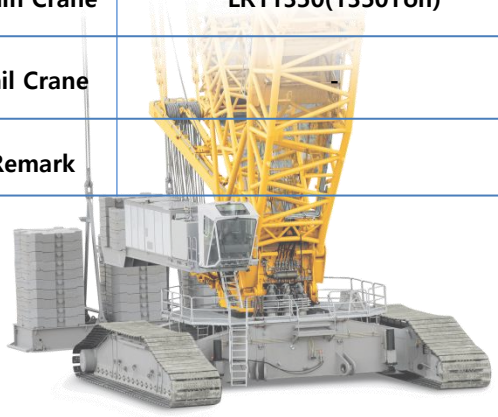
Project	Russkiy Island Bridge installation
Contractor	SK MOST
Location	Vladivostok, Russia
Period	2011.09~
Main Crane	LR11350(1350Ton)
Tail Crane	-
Remark	



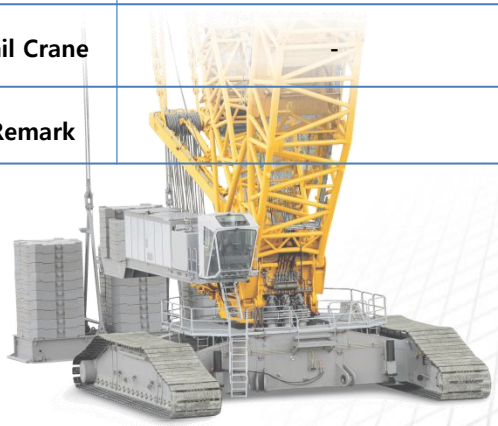
III. Business Performance Data

4) Construction

Project	Samsung Semiconductor FAB #2 Over Bridge Installation
Contractor	Samsung c&t
Location	Pyeongtaek
Period	2019.04~
Main Crane	LR11350(1350Ton)
Tail Crane	-
Remark	



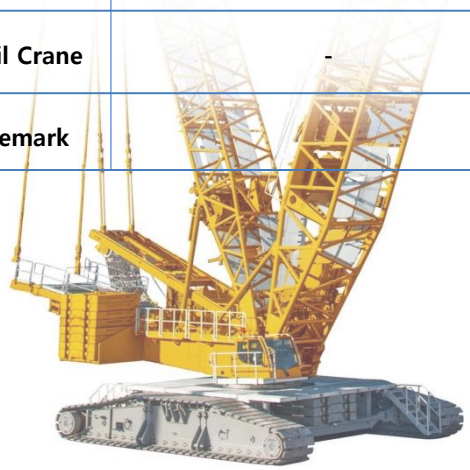
Project	Honam high-speed railway section 1-1 Girder installation
Contractor	DH Construction
Location	Jeonnam
Period	2011.03~
Main Crane	LR11350(1350Ton)
Tail Crane	-
Remark	



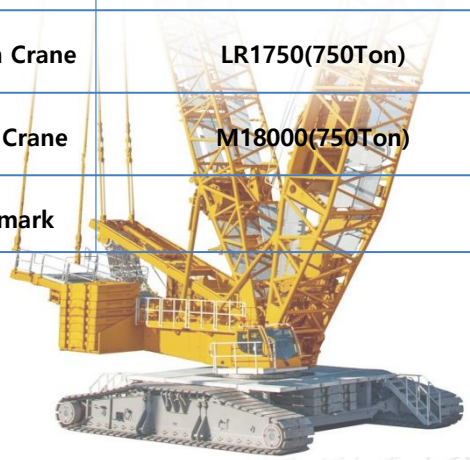
III. Business Performance Data

4) Construction

Project	Construction of Chado 1 Bridge and 3 Bridges in Busan North Port
Contractor	Daesung Steel Bridge
Location	Busan
Period	2021.05~
Main Crane	LR1750(750Ton)
Tail Crane	-
Remark	



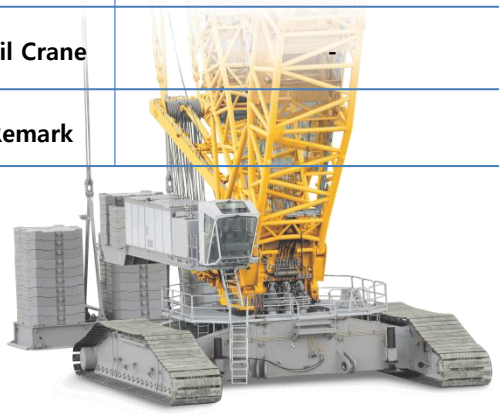
Project	Saemangeum Steel Bridge Girder Installation
Contractor	Daesung Steel Bridge
Location	Gunsan
Period	2019.09~
Main Crane	LR1750(750Ton)
Tail Crane	M18000(750Ton)
Remark	

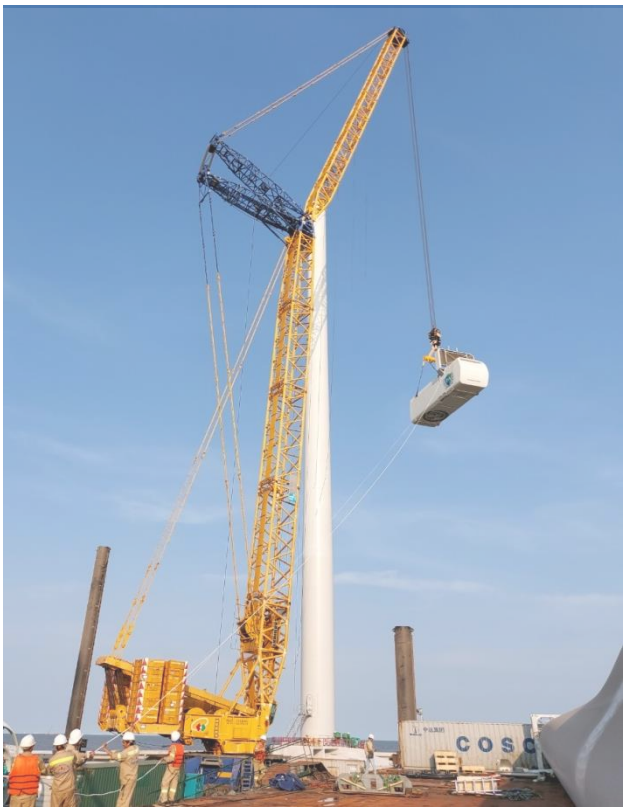


III. Business Performance Data

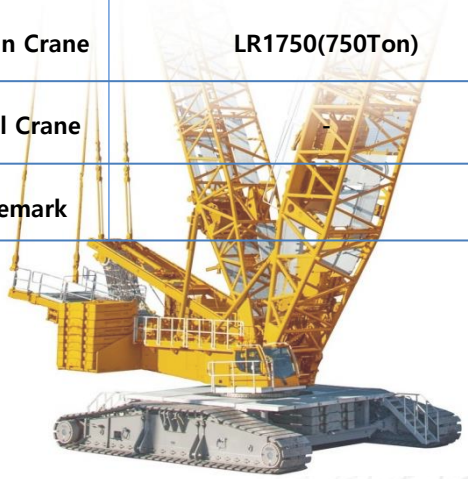
5) Wind Power

Project	Installation of offshore wind power generators in Vietnam
Contractor	MINH HOANG
Location	Vietnam
Period	2021.01~
Main Crane	LR11350(1350Ton)
Tail Crane	-
Remark	





Project	Yeongheung wind power generator replacement work
Contractor	Doosan Heavy Industries
Location	Incheon
Period	2021.03~
Main Crane	LR1750(750Ton)
Tail Crane	-
Remark	



SAFETY

I. Safety · Health · Environmental

Safety, Health and Environmental, Quality

Hanchang Heavy Equipment is actively striving to become an advanced workplace in terms of safety (S), health (H), and environment (E) management.
We want to adhere to the following principles for active HSE performance.

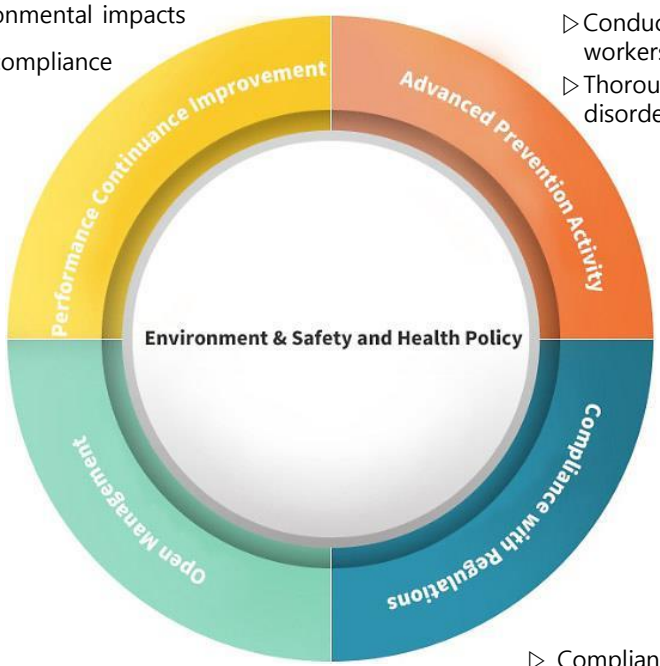
▷Establish and secure goals and plans to minimize and improve risks and environmental impacts

▷Conduct SHE requirements compliance assessment

▷ Workplace and site safety management

▷Conduct regular health checkups for workers

▷Thorough management of musculoskeletal disorders



▷Safety, environment and health policy and performance internal/external disclosure Maintaining transparency

▷Conducting a safety, health and environment (SHE) meeting once a week

▷Thorough sharing and response to major issues related to workplace and site safety

▷ Compliance with safety environment and health laws and thorough education

▷Approval of off-site impact assessment

Efforts for Safety

▷Preliminary on-site meeting through on-site survey

▷Before work, after TBM, work input

▷Signalman during work Thorough signal system

▷Thorough tidy up after work!

Zero equipment error

▷Thorough equipment inspection provides seamless solutions in case of equipment failure

▷After conducting self-inspection of the equipment once a week, check for abnormalities

▷Complete pre-inspection and non-destructive inspection before input

II. Safety Management

1) Safety training and inspection

■ Safety Education

new education	1. In-house safety training for new printing 2. Health checkup before hiring
regular education	1. Conduct safety training for all workers for at least 2 hours once a month -Focus on high-risk work
special education	1. Conducted safety training for the types of work subject to special safety training - Work using construction machinery 2. Conducting special safety training at the head office once a month
before work education	1. Strengthen safety awareness among work team members through TBM practice before work 2. Establishment of a culture of voluntary safety practices for risk factors

■ Safety Inspection

- B/S inspection (3 months): Construction machine function and condition inspection
- Functional inspection (three times a year): Inspection of function and condition of construction equipment, insurance documents
- Safety inspection (6 months): Construction Machinery Management Act + Occupational Safety and Health Act (enforced from January 26, 2012)
- Non-destructive inspection: Bolt, MAST ultrasonic inspection, BOOM BRACER, etc., ultrasonic inspection
- Special inspection: Special inspection in preparation for the winter season

■ Safety Gear

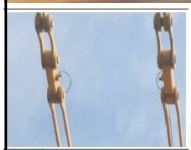
- Provision of personal safety equipment such as safety helmets, safety shoes, safety belts (whole type, upper body type), and leggings for new hires

■ Vulnerable Workers (new/old/service) management

- Determination of site suitability and identification of workers through interviews with new employees
- Timely input after preparation of personnel input plan
- Increased work efficiency through efficient task division according to ability
- Refrain from hiring unverified new workers and seniors through employment agencies
- Prohibition of using service workers(efficiency⊂cost,accident risk↑,quality↓)
- Eliminate accidents caused by personal diseases in the field through health status checks and health examinations before hiring
- Eliminate accidents caused by drinking on site by conducting alcohol testing and strengthening sanctions for workers during inquiry

■ Safety Management Activities

- Work progress after TBM before work
- Preparation of daytime and nighttime work safety plans and consultation on matters of interference through meetings in charge of each company
- Discovery of risk factors for all types of work and devising countermeasures through joint safety patrol (realization of immediate measures)

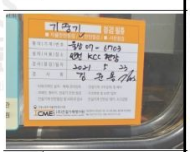

31 LOAD CELL 확인


32 데릭 지지 램 압력 센서 상태 확인


33 후방카메라 확인


34 각종 모니터 작동상태 확인


35 각종 계기 작동상태 확인


36 경고 필증 부착 확인


턴테이블 용접부 균열여부 확인


메인 후크 균열여부 확인


메인 후크 균열여부 확인

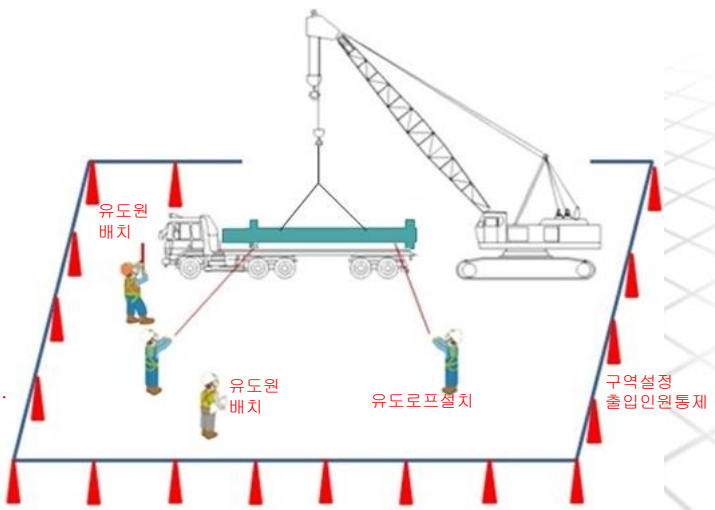

붐 베이스 용접부 균열여부 확인

II. Safety Management

2) Site Safety Management

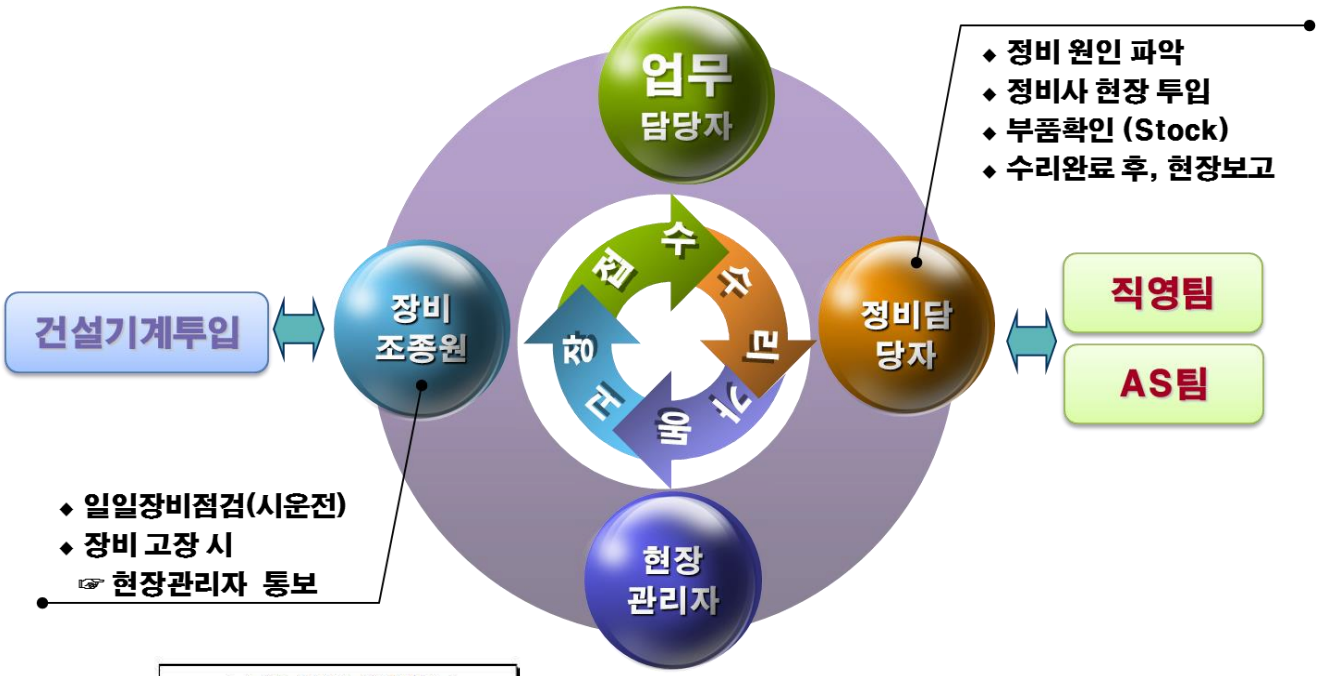
작업 흐름	사진	내용	위험요소	사고 예방 Check
1. Training completion and certification (approval)		1. Awareness of work content 2. Confirmation of expected risk factors during equipment operation 3. Issuance of driver signalman test certification	1. Safety accident during work	1. Communicate key information such as role by job 2. Communicate work details and risk factors 3. Safety certification system certification and approval
2. Zoning and control (placement)		1. Secure lifting work place 2. Preliminary check of risk factors around the work place 3. Installation of safety facilities	1. Safety accidents such as confinement and falling in the work place	1. Site inspection and hazard identification (Foremen, officials) 2. Removal of harmful elements around the workplace
3. Equipment Check(set up)		1. Omission of other harmful factors such as mechanical defects 2. Check equipment usage restrictions 3. Install outriggers and check braces	1. collapse fall accident 2. damage to obstruction 3. fall accident	1. Reexamination of risk factors 2. Check the counterweight for the weight specification 3. Inspection before use, use of checklist
4. Placing and tying signalmen		1. Put on the signalman's uniform and check the leash 2. Binders obey the signal of the lower signalman 3. Compliance with induction rope fastening 4. Check for interference within the upper turning radius	1. Breaking the rope and falling accident 2. Lifting accident with poor connection 3. Material collisions, confinement accidents 4. Collision between equipment	1.Inspection of tether before tying 2. Level check after binding 3. Induction of heavy lifting using an induction rope 4. Check for nearby interference
5. lifting		1.The signalman checks the location of the lifting object in advance and conducts a thorough signal 2. Lifting cargo is settling according to signalman's radio signal	1. left at high altitude for a long time 2. Collisions and constriction accidents during lifting	1. pre-positioning(Lower→Upper signal handover strict adherence) 2. Utilize the In-Use Inspection Checklist
6. Lifting cargo binding termination		1. Lifting cargo binding termination	1. Safety accident while handling heavy lifting (entanglement, overturning)	1. Be careful not to stumble and Stumble
7. end of work		1. tidying up the workplace 2. Securing export route		1. Inspection after use (Cleaning up and cleaning))

division	Safety management when using a crane
Key Safety Management Measures	▶ Review of material fall safety cases when using a crane - Constriction due to insufficient work area / overturning caution - Safety team approval confirmation before work (heavy equipment approval letter) - When lifting crane materials, check wire connection. Lift materials according to the signals of the signalman. - Securing the work zone for the guide - Work proceeds after safety team approval



II. Safety Management

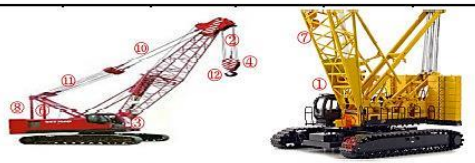
3) Equipment Maintenance



크롤러 크레인 안전점검표

□ 반입 전 □ 반입 □ 일일 □ 월간

현장명 : 협력사명 : 등록번호 : 점검일자 :



번호	점검항목	점 검 방 법	월	화	수	목	금	토	점검항목 사진	
①	과부하 방지장치	작동 시 경보음과 함께 권상 및 하중이 증가하는 동작이 차단 될 것							과부하방지장치	권과방지장치
②	권과 방지장치	훅이 최상부에 도달하기 전에 경보음과 함께 작동이 정지될 것								
③	기복 제한장치	앵글 붐의 경사각 범위를 정상적으로 제어할 것							기복제한장치	훅 및 시브
④	훅 및 시브	훅 해지장치는 탈락 등의 이상이 없고 훅, 시브(도르래)는 회전이 원활할 것								
⑤	브레이크 및 클러치	브레이크, 클러치 및 조정장치 등은 기능이 정상일 것							브레이크&클러치	역회전방
⑥	역회전 방지장치	역회전방지장치는 정상 작동되고 이상 없이 양호할 것								
⑦	앵글붐 (격자)	앵글붐은 변형 및 균열이 없으며 각 연결부는 체결상태가 양호할 것							앵글붐(격자)	카운터웨이트
⑧	카운터 웨이트	임의개조가 없으며 제원표와 무게가 일치하고 견고하게 고정될 것								
⑨	트랙 및 철관	트랙은 손상, 변형 등의 이상이 없고 지반상태 및 보강에 이상이 없을 것							트랙	와이어로프
⑩	와이어로프	와이어로프는 소선파단, 마모,킹크 등의 이상이 없이 양호할 것								
⑪	와이어로프 이탈방지	드럼에서 단말까지 이탈의 우려 없이 제조사의 기준을 준수하여 설치될 것							이탈방지	소켓&단말처리
⑫	소켓 및 단말처리	웨지 소켓 규격 등 와이어로프 단말처리 방법은 기준에 맞을 것								
점검자 의견										
점검자		(서명) 시공관리자				(서명)			안전관리자	(서명)

III. WORK FLOW

1) Ground Reinforcement Plan

▷ After the on-site survey meeting before the crane input, it is decided whether or not to input the work

▷ When inserting soft ground, after burying steel mat (220T), compact rubble and install the crane

▷ After laying the steel plate (50T) in the ballast trailer swing section, work is carried out

2) Ground Bearing Pressure

▷ Ground endurance test before equipment input

▷ Securing site-required load capacity of soft ground - Reinforcing steel mats and steel plates

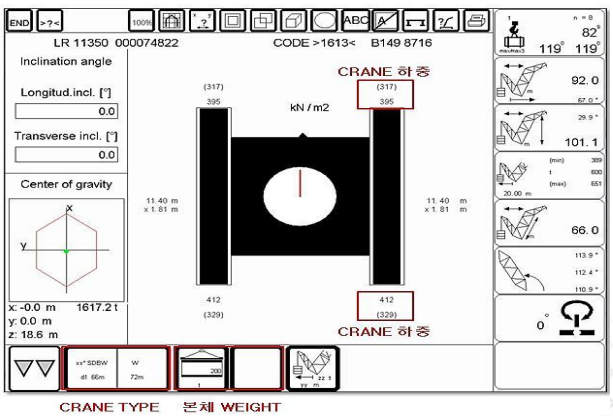
▷ ground reinforcement rubble compaction

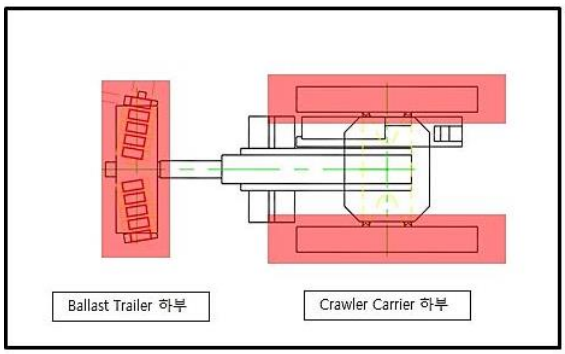
다. Crawler Carrier 하부 최대 지내력 (Steel Mat보강시)

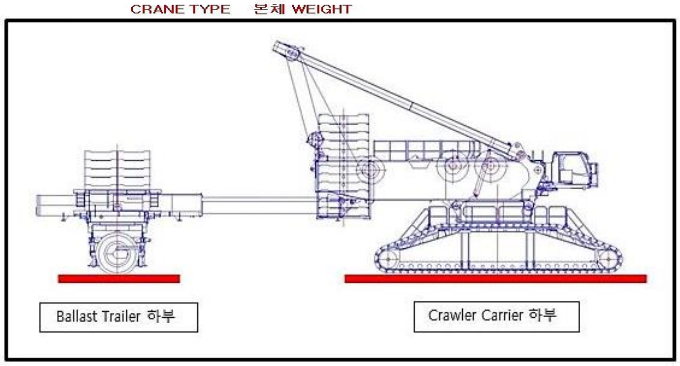
DESCRIPTION	CALCULATION	REMARK
Crawler Crane 면적	(13.1m x 2.4m) x 2ea = 62.9㎡	Steel Mat(2.4m x 6m x 220t)
Total Weight	916.3ton + 466.5ton = 1382.8ton	
지내력	1382.8ton / 62.9㎡ = 22.0ton/㎡	
요구 지내력	22.0ton x 안전율(1.3) = 28.6ton/㎡	

라. Ballast Trailer 하부 지내력 (STEEL PLATE)

DESCRIPTION	CALCULATION	REMARK
Ballast Trailer 면적	(4.8m x 6m) x 2ea = 57.6㎡	Steel Plate(2.4m x 6m x 50t)
Total Weight	600.0ton	
지내력	600.0ton / 57.6㎡ = 10.4ton/㎡	
요구 지내력	10.4ton x 안전율(1.3) = 13.5ton/㎡	





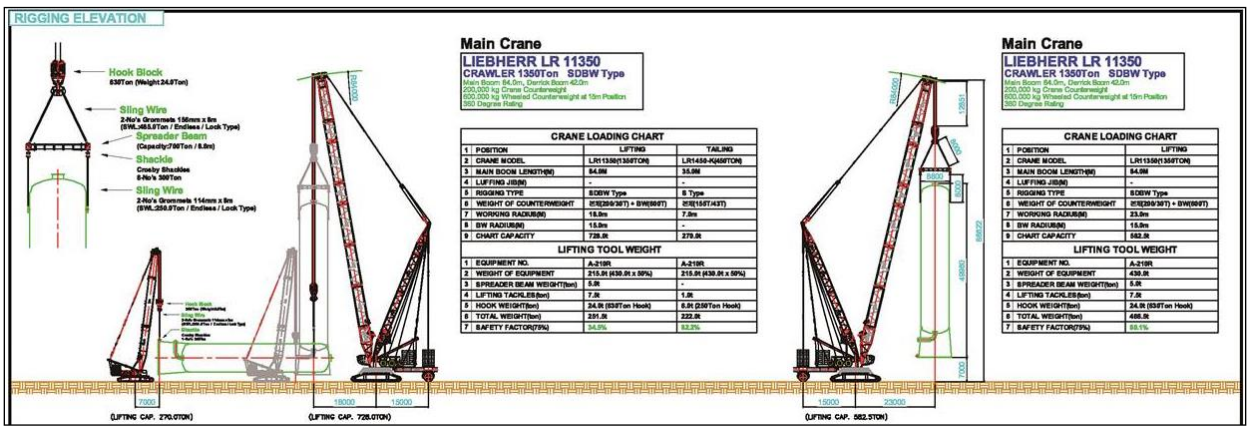


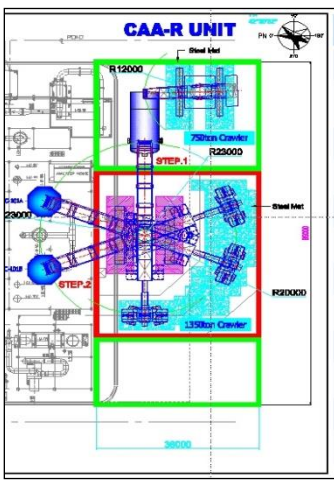
III. WORK FLOW

3) Rigging Simulation(2D, 3D)

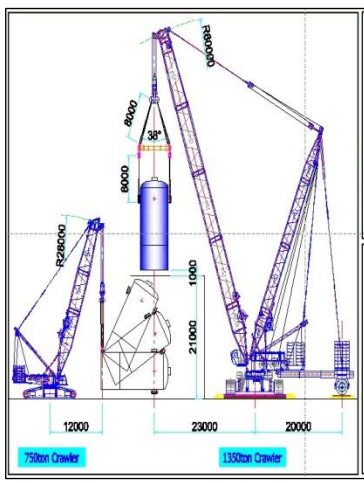
▷ Conducting meetings with suppliers after reviewing the rigging plan before entering the field

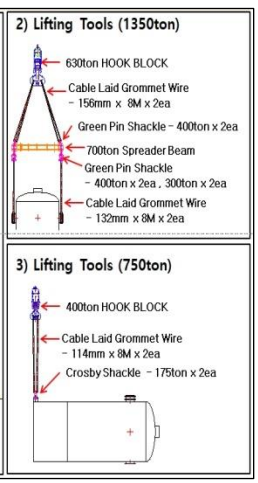
▷ CAD (2D, 3D) rigging plan and LIEBHERR program (LICA PLAN) review, safety assurance

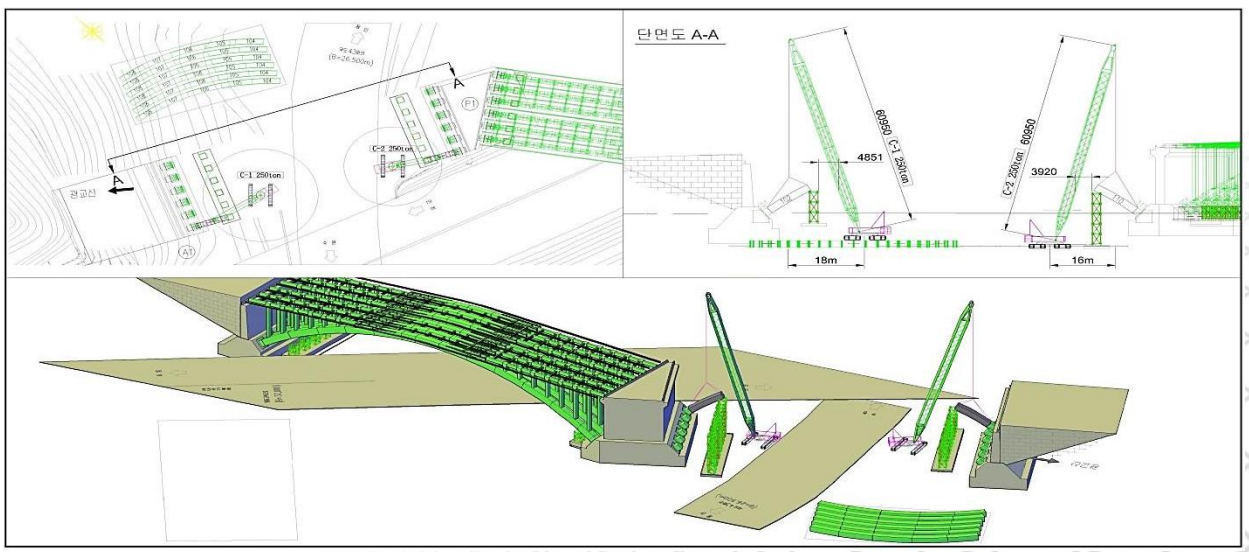




구 분	Main Crane	Tailing Crane
MAIN BOOM	60m	28m
DERRICK BOOM	42m	-
RIGGING TYPE	SDBW(20m) Type	S Type
COUNTER WEIGHT	200t + 60t	95t + 220t
OPERATING RADIUS	23m	12m
CHART CAPACITY	707ton	329ton
HOOK BLOCK	630ton Hook	400ton Hook
EQUIPMENT NO.	E-DC-101 A/B	E-DC-101A/B
WEIGHT OF EQUIPMENT	532.0ton	266.0ton (532.0 x 50%)
WEIGHT OF OTHER	43.0ton	15.0ton
TOTAL LIFT WEIGHT	575.0ton	281.0ton
% of CHART CAPACITY	81.3%	85.4%



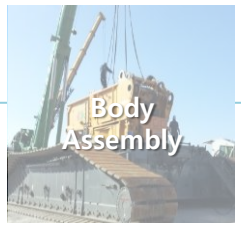




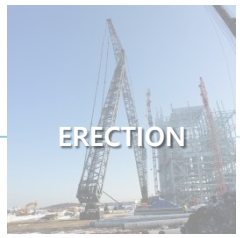
III. WORK FLOW

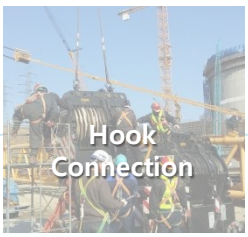
4) Ass'y Plan

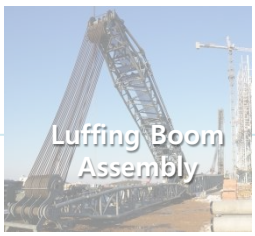
▷ Operation of a direct management team with over 300 assembly & disassembly experience in Korea
▷ On-site Know-How Abundant Equipment Specialist Arrangement
▷ Equipment direct management AS team always on standby
▷ Establishment of a rapid maintenance system by pre-equipment of spare parts



Ass'y Flow Chart

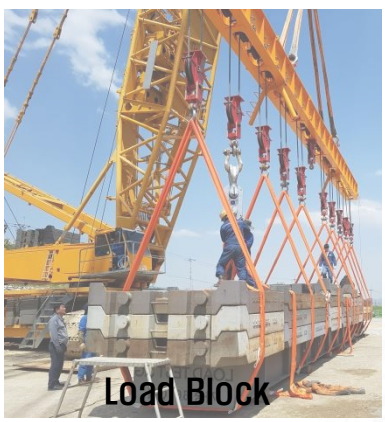


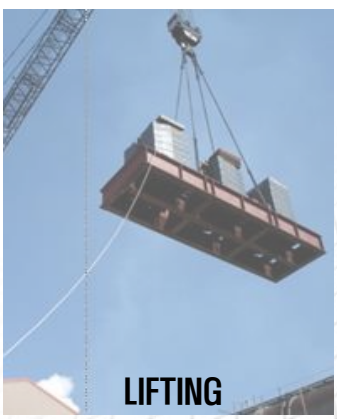




5) Load Test

▷ Ground condition check . Check mat condition. Confirm
▷ Safety device . Enter specifications. Confirm
▷ Check and confirm whether or not there is a problem with the system
▷ Securing work efficiency and safety through smooth communication with the signalman
▷ Work input after daily operator inspection





Always think the same as the customer

"Safety First"

"Thorough Maintenance"

"Fulfillment of Responsibility"

It is the heart of Hanchang Heavy Machinery.